

CRY FROM A FAR PLANET

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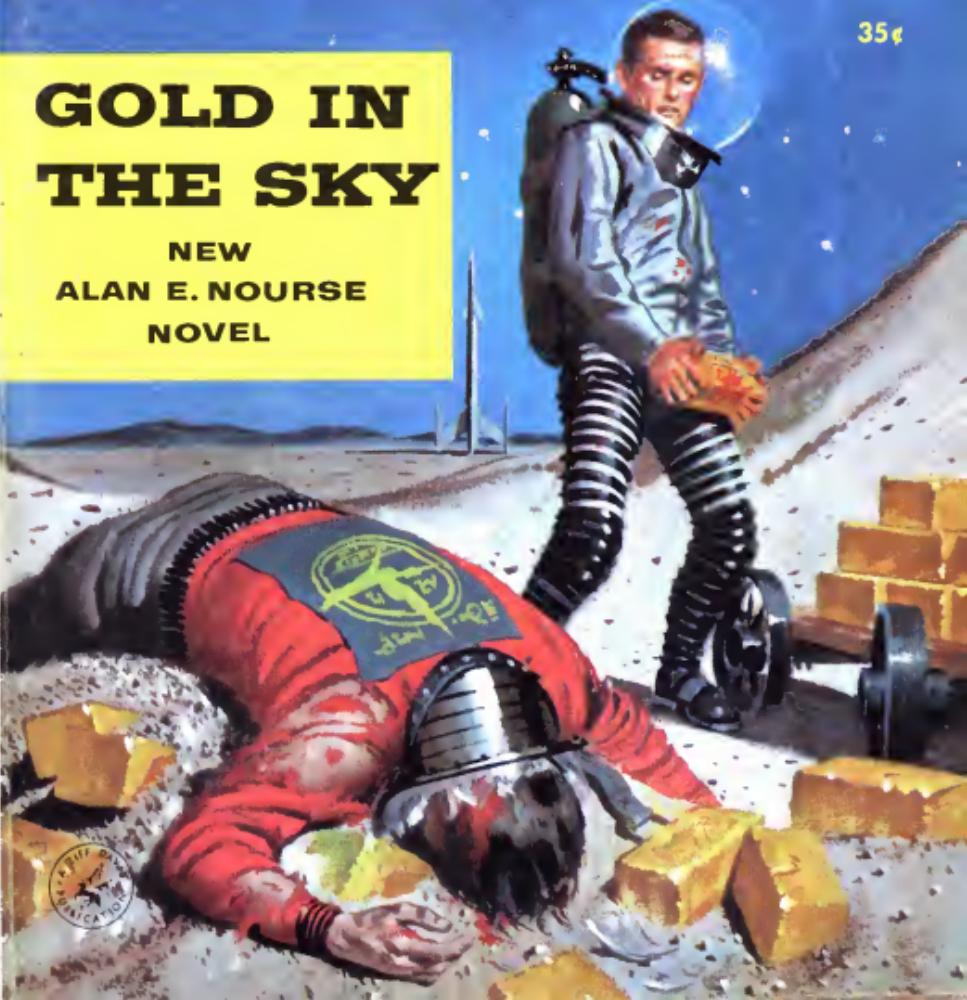
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CRY FROM A FAR PLANET

By TOM GODWIN

ILLUSTRATOR MARTINEZ

The problem of separating the friends from the enemies was a major one in the conquest of space as many a dead spacer could have testified. A tough job when you could see an alien and judge appearances; far tougher when they were only whispers on the wind.

A smile of friendship is a baring of the teeth. So is a snarl of menace. It can be fatal to mistake the latter for the former.

Harm an alien being only under circumstances of self-defense.

TRUST NO ALIEN BEING UNDER ANY CIRCUMSTANCES.

—From *Exploration Ship's Handbook*.

HE LISTENED in the silence of the Exploration ship's control room. He heard nothing but that was what bothered him; an ominous quiet when there should have been a multitude of sounds from the nearby



Was the cat native



to the planet, or to his imagination?

village for the viewscreen's audio-pickups to transmit. And it was more than six hours past the time when the native, Throon, should have come to sit with him outside the ship as they resumed the laborious attempt to learn each other's language.

The viewscreen was black in the light of the control room, even though it was high noon outside. The dull red sun was always invisible through the world's thick atmosphere and to human eyes full day was no more than a red-tinged darkness.

He switched on the ship's outside floodlights and the viewscreen came to bright white life, showing the empty glades reaching away between groves of purple alien trees. He noticed, absently, that the trees seemed to have changed a little in color since his arrival.

The village was hidden from view by the outer trees but there should have been some activity in the broad area visible to him. There was none, not even along the distant segment of what should have been a busy road. The natives were up to something and he knew, from hard experience on other alien worlds, that it would be nothing good. It would be another misunderstanding of some kind and he didn't know enough of their incomprehensible language to ask them what it was—

Suddenly, as it always came, he felt someone or something

standing close behind him and peering over his shoulder. He dropped his hand to the blaster he had taken to wearing at all times and whirled.

Nothing was behind him. There never was. The control room was empty, with no hiding place for anything, and the door was closed, locked by the remote-control button beside him. There was nothing.

The sensation of being watched faded, as though the watcher had withdrawn to a greater distance. It was perhaps the hundredth time within six days that he had felt the sensation. And when he slept at night something came to nuzzle at his mind; faceless, formless, utterly alien. For the past three nights he had not let the blaster get beyond quick reach of his hand, even when in bed.

But whatever it was, it could not be on the ship. He had searched the ship twice, a methodical compartment - by - compartment search that had found nothing. It had to be the work of the natives from outside the ship. Except . . .

Why, if the natives were telepathic, did the one called Throon go through the weary pretense of trying to learn a mutually understandable form of communication?

There was one other explanation, which he could not accept: that he was following in the footsteps of Will Garret of Ship Nine who had deliberately gone into a white sun two months

after the death of his twin brother.

He looked at the chair beside his own, Johnny's chair, which would forever be empty, and his thoughts went back down the old, bitter paths. The Exploration Board had been wrong when they thought the close bond between identical twins would make them the ideal two-man crews for the lonely, lifetime journeys of the Exploration Ships. Identical twins were too close; when one of them died, the other died in part with him.

They had crossed a thousand light-years of space together, he and Johnny, when they came to the bleak planet that he would name Johnny's World. He should never have let Johnny go alone up the slope of the honey-combed mountain—but Johnny had wanted to take the routine record photographs of the black, tiger-like beasts which they had called cave cats and the things had seemed harmless and shy, despite their ferocious appearance.

"I'm taking them a sack of food that I think they might like," Johnny had said. "I want to try to get some good close-up shots of them."

Ten minutes later he heard the distant snarl of Johnny's blaster. He ran up the mountain-side, knowing already that he was too late. He found two of the cave cats lying where Johnny had killed them. Then he found Johnny, at the foot of a high cliff. He was dead, his neck

broken by the fall. Scattered all around him from the torn sack was the food he had wanted to give to the cats.

He buried Johnny the next day, while a cold wind moaned under a lead-gray sky. He built a monument for him; a little mound of frosty stones that only the wild animals would ever see—

A chime rang, high and clear, and the memories were shattered. The orange light above the hyperspace communicator was flashing; the signal that meant the Exploration Board was calling him from Earth.

He flipped the switch and said, "Paul Jameson, Exploration Ship One."

The familiar voice of Brender spoke:

"It's been some time since your preliminary report. Is everything all right?"

"In a way," he answered. "I was going to give you the detailed report tomorrow."

"Give me a brief sketch of it now."

"Except for their short brown fur, the natives are humanoid in appearance. But there are basic differences. Their body temperature is cool, like their climate. Their vision range is from just within the visible red on into the infrared. They'll shade their eyes from the light of anything as hot as boiling water but they'll look square into the ship's floodlights and never see them."

"And their knowledge of science?" Brender asked.

"They have a good understanding of it, but along lines entirely different from what our own were at their stage of development. For example: they power their machines with chemicals but there is no steam, heat, or exhaust."

"That's what we want to find—worlds where branches of research unknown to our science are being explored. How about their language?"

"No progress with it yet." He told Brender of the silence in the village and added, "Even if Throon should show up I could not ask him what was wrong. I've learned a few words but they have so many different definitions that I can't use them."

"I know," Brender said. "Variable and unrelated definitions, undetectable shades of inflection—and sometimes a language that has no discernibly separate words. The Singer brothers of Ship Eight ran into the latter. We've given them up as lost."

"The Singers—dead?" he exclaimed. "Good God—it's been only a month since the Ramon brothers were killed."

"The circumstances were similar," Brender said. "They always are. There is no way the Exploration men can tell the natives that they mean them no harm and the suspicion of the natives grows into dangerous hostility. The Singers reported the natives on that world to be

both suspicious and possessing powerful weapons. The Singers were proceeding warily, their own weapons always at hand. But, somehow, the natives caught them off-guard—their last report was four months ago."

There was a silence, then Brender added, "Their ship was the ninth—and we had only fifteen."

He did not reply to the implications of Brender's statement. It was obvious to them all what the end of the Plan would be. What it had to be.

It had been only three years since the fifteen heavily armed Exploration ships set out to lead the way for Terran expansion across the galaxy; to answer a cry from far planets, and to find all the worlds that held intelligent life. That was the ultimate goal of the Plan: to accumulate and correlate all the diverse knowledge of all the intelligent life-forms in the galaxy. Among the achievements resulting from that tremendous mass of data would be a ship's drive faster even than hyperspace; the Third Level Drive which would bring all the galaxies of the universe within reach.

And now nine ships were gone out of fifteen and nineteen men out of thirty . . .

"The communication barrier," Brender said. "The damned communication barrier has been the cause behind the loss of

every ship. And there is nothing we can do about it. We're stymied by it . . ."

The conversation was terminated shortly afterward and he moved about the room restlessly, wishing it was time to lift ship again. With Johnny not there the dark world was like a smothering tomb. He would like to leave it behind and drive again into the star clouds of the galaxy; drive on and on into them—

A ghostly echo touched his mind; restless, poignantly yearning. He swung to face the locked door, knowing there could be nothing behind it. The first real fear came to him as he did so. The thing was lonely—the thing that watched him was as lonely as he was . . .

What else could any of it be but the product of a mind in the first stage of insanity?

The natives came ten minutes later.

The viewscreen showed their chemically - powered vehicle emerge from the trees and roll swiftly across the glade. Four natives were in it while a fifth one lay on the floor, apparently badly injured.

The vehicle stopped a short distance in front of the airlock and he recognized the native on the floor. It was Throon, the one with whom he had been exchanging language lessons.

They were waiting for him when he emerged from the ship, pistol-like weapons in their belts

and grim accusation in their manner.

Throon was muttering unintelligibly, unconscious. His skin, where not covered by the brown fur, was abnormal in appearance. He was dying.

The leader of the four indicated Throon and said in a quick, brittle voice: "*Ko reegar feen no-dran!*"

Only one word was familiar: *Ko*, which meant "you" and "yesterday" and a great many other things. The question was utterly meaningless to him.

He dropped his hand a little nearer his blaster as the leader spoke again; a quick succession of unknown words that ended with a harshly demanding "*kreson!*"

Kreson meant "now," or "very quickly." All the other words were unfamiliar to him. They waited, the grim menace about them increasing when he did not answer. He tried in vain to find some way of explaining to them he was not responsible for Throon's sickness and could not cure it.

Then he saw the spray of leaves that had caught on the corner of the vehicle when it came through the farther trees.

They were of a deep purple color. All the trees around the ship were almost gray by contrast.

Which meant that he was responsible for Throon's condition.

The cold white light of the ship's floodlights, under which

he and Throon had sat for day after day, contained radiations that went through the violet and far into the ultraviolet. To the animal and vegetable life of the dark world such radiations were invisibly short and deadly.

Throon was dying of hard-radiation sickness.

It was something he should have foreseen and avoided—and that would not have happened had he accepted old Throon's pantomimed invitation, in the beginning, to go with him into the village to work at the language study. There he would have used a harmless battery lamp for illumination . . . but there was no certainty that the natives were not planning to lay a trap for him in the village and he had refused to go.

It did not matter—there was a complex radiation-neutralizer and cell-reconstructor in the ship which would return Throon to full, normal health a few hours after he was placed in its chamber.

He turned to the leader of the four natives and motioned from Throon to the airlock. "Go—there," he said in the native language.

"*Bron!*" the leader answered. The word meant "No" and there was a determination in the way he said it that showed he would not move from it.

At the end of five minutes his attempts to persuade them to take Throon into the ship had increased their suspicion of his motives to the point of critical

danger. If only he could tell them *why* he wanted Throon taken into the ship . . . But he could not and would have to take Throon by first disposing of the four without injuring them. This he could do by procuring one of the paralyzing needle-guns from the ship.

He took a step toward the ship and spoke the words that to the best of his knowledge meant: "I come back."

"Feswin ilt k'la."

Their reply was to snatch at their weapons in desperate haste, even as the leader uttered a hoarse word of command. He brought up the blaster with the quick motion that long training had perfected and their weapons were only half drawn when his warning came:

"Bron!"

They froze, but did not release their weapons. He walked backward to the airlock, his blaster covering them, the tensely waiting manner in which they watched his progress telling him that the slightest relaxation of his vigilance would mean his death. He did not let the muzzle of the blaster waver until he was inside the airlock and the outer door had slid shut.

He was sure that the natives would be gone when he returned. And he was sure of another thing: That whatever he had said to them, it was not what he had thought he was saying.

He saw that the glade was empty when he opened the air-

lock again. At the same time a bomb-like missile struck the ship just above the airlock and exploded with a savage crash. He jabbed the *Close* button and the door clicked shut barely in advance of three more missiles which hammered at its impervious armor.

So that, he thought wearily, is that.

He laid the useless needle-gun aside. The stage was past when he could hope to use it. He could save Throon only by killing some of the others—or he could lift ship and leave Throon to die. Either action would make the natives hate and fear Terrans; a hatred and fear that would be there to greet all future Terran ships.

That was not the way a race gave birth to peaceful galactic empire, was not the purpose behind the Plan. But always, wherever the Exploration men went, they encountered the deadly barrier; the intangible, unassailable communication barrier. With the weapons an Exploration man carried in his ship he had the power to destroy a world—but not the power to ask the simple questions that would prevent fatal misunderstandings.

And before another three years had passed the last Exploration man would die, the last Exploration ship would be lost.

He felt the full force of hopelessness for the first time. When Johnny had been alive it had been different; Johnny, who had

laughed whenever the outlook was the darkest and said, “*We'll find a way, Paul—*”

The thought broke as suddenly, unexpectedly, he felt that Johnny was very near. With the feeling came the soft enclosure of a dream-like peace in which Johnny's death was vague and faraway; only something that had happened in another dream. He knew, without wondering why, that Johnny was in the control room.

A part of his mind tried to reject the thought as an illusion. He did not listen—he did not want to listen. He ran to the ship's elevator, stumbling like one not fully awake. Johnny was waiting for him in the control room—alive—alive—

He spoke as he stepped into the control room:

“Johnny—”

Something moved at the control board, black and alien, standing tall as a man on short hind legs. Yellow eyes blazed in a feline face.

It was a cave cat, like the ones that had killed Johnny.

Realization was a wrenching shock and a terrible disillusionment. Johnny was not waiting for him—not alive—

He brought up the blaster, the dream-like state gone. The paw of the cave cat flashed out and struck the ship's master light switch with a movement faster than his own. The room was instantly, totally, dark.

He fired and pale blue fire

lanced across the room, to reveal that the cave cat was gone. He fired again, quickly and immediately in front of him. The pale beam revealed only the ripped metal floor.

"I am not where you think."

The words spoke clearly in his mind but there was no directional source. He held his breath, listening for the whisper of padded feet as the cave cat flashed in for the kill, and made a swift analysis of the situation.

The cave cat was telepathic and highly intelligent and had been on the ship all the time. It and the others had wanted the ship and had killed Johnny to reduce opposition to the minimum. He, himself, had been permitted to live until the cave cat learned from his mind how to operate the almost-automatic controls. Now, he had served his purpose—

"You are wrong."

Again there was no way he could determine the direction from which the thought came. He listened again, and wondered why it had not waylaid him at the door.

Its thought came:

"I had to let you see me or you would not have believed I existed. It was only here that I could extinguish all lights and have time to speak before you killed me. I let you think your brother was here . . ." There was a little pause. "I am sorry. I am sorry. I should have used some other method of luring you here."

He swung the blaster toward what seemed to be a faint sound near the astrogator unit across the room.

"We did not intend to kill your brother."

He did not believe it and did not reply.

"When we made first telepathic contact with him, he jerked up his blaster and fired. In his mind was the conviction that we had pretended to be harmless animals so that we could catch him off-guard and kill him. One of us leaped at him as he fired the second time, to knock the blaster from his hand. We needed only a few minutes in which to explain—but he would not trust us that long. There was a misjudgment of distance and he was knocked off the cliff."

Again he did not reply.

"We did not intend to kill your brother," the thought came, *"but you do not believe me."*

He spoke for the first time. "No, I don't believe you. You are physically like cats and cats don't misjudge distances. Now, you want something from me before you try to kill me, too. What is it?"

"I will have to tell you of my race for you to understand. We call ourselves the Varn, in so far as it can be translated into a spoken word, and we are a very old race. In the beginning we did not live in caves but there came a long period of time, for thousands of years, when the climate

on our world was so violent that we were forced to live in the caves. It was completely dark there but our sense of smell became very acute, together with sufficient sensitivity to temperature changes that we could detect objects in our immediate vicinity. There were subterranean plants in the caves and food was no problem.

"We had always been slightly telepathic and it was during our long stay in the caves that our intelligence and telepathic powers became fully developed. We had only our minds—physical science is not created in dark caves with clumsy paws.

"The time finally came when we could leave the caves but it was of little help to us. There were no resources on our world but earth and stone and the thin grass of the plains. We wondered about the universe and we knew the stars were distant suns because one of our own suns became a star each winter. We studied as best we could but we could see the stars only as the little wild animals saw them. There was so much we wanted to learn and by then we were past our zenith and already dying out. But our environment was a prison from which we could never escape.

"When your ship arrived we thought we might soon be free. We wanted to ask you to take some of us with you and arrange for others of your race to stop by on our world. But you dis-

missed us as animals, useful only for making warm fur coats, because we lived in caves and had no science, no artifacts—nothing. You had the power to destroy us and we did not know what your reaction would be when you learned we were intelligent and telepathic. A telepathic race must have a high code of ethics and never intrude unwanted—but would you have believed that?"

He did not answer.

"The death of your brother changed everything. You were going to leave so soon that there would be no time to learn more about you. I hid on the ship so I could study you and wait until I could prove to you that you needed me. Now, I can—Throon is dying and I can give you the proper words of explanation that will cause the others to bring him into the ship."

"Your real purpose—what is it?" he asked.

"To show you that men need the Varn. You want to explore the galaxy, and learn. So do the Varn. You have the ships and we have the telepathic ability that will end the communication problem. Your race and mine can succeed only if we go together."

He searched for the true, and hidden, purpose behind the Varn proposal and saw what it would have to be.

"The long-range goal—you failed to mention that . . . your ultimate aim."

"I know what you are think-

ing. How can I prove you wrong now?"

There was no way for the Varn to prove him wrong, nor for him to prove the treachery behind the Varn proposal. The proof would come only with time, when the Terran-Varn co-operation had transformed Terrans into a slave race.

The Varn spoke again. "You refuse to believe I am sincere?"

"I would be a naive fool to believe you."

"It will be too late to save Throon unless we act very quickly. I have told you why I am here. There is nothing more I can do to convince you but be the first to show trust. When I switch on the lights it will be within your power to kill me."

The Varn was gambling its life in a game in which he would be gambling the Plan and his race. It was a game he would end at the first sound of movement from the astrogator unit across the room . . .

"I have been here beside you all the time."

A furry paw brushed his face, claws flicked gently but grimly reminding along his throat.

He whirled and fired. He was too late—the Varn had already leaped silently away and the beam found only the bare floor. Then the lights came on, glaringly bright after the darkness, and he saw the Varn.

It was standing by the control board, its huge yellow eyes watching him. He brought the

blaster into line with it, his finger on the firing stud. It waited, not moving or shrinking from what was coming. The translucent golden eyes looked at him and beyond him, as though they saw something not in the room. He wondered if it was in contact with its own kind on Johnny's World and was telling them it had made the gamble for high stakes, and had lost.

It was not afraid—not asking for mercy . . .

The killing of it was suddenly an act without savor. It was something he would do in the immediate future but first he would let it live long enough to save Throon.

He motioned with the blaster and said, "Lead the way to the airlock."

"And afterward—you will kill me?"

"Lead the way," he repeated harshly.

It said no more but went obediently past him and trotted down the corridor like a great, black dog.

He stood in the open airlock, the Varn against the farther wall where he had ordered it to stand. Throon was in the radiation chamber and he had held his first intelligible conversation with the natives that day.

The Varn was facing into the red-black gloom outside the lighted airlock, where the departing natives could be heard crossing the glade. *"Their thoughts no longer hold fear*

and suspicion," it said. *"The misunderstanding is ended."*

He raised the muzzle of the blaster in his hand. The black head lifted and the golden eyes looked up at him.

"I made you no promise," he said.

"I could demand none."

"I can't stop to take you back to your own world and I can't leave you alive on this one—with what you've learned from my mind you would have the natives build the Varn a disintegrator-equipped space fleet equal to our own ships."

"We want only to go with you."

He told it what he wanted it to know before he killed it, wondering why he should care:

"I would like to believe you are sincere—and you know why I don't dare to. Trusting a telepathic race would be too dangerous. The Varn would know everything we knew and only the Varn would be able to communicate with each new alien race. We would have to believe what the Varn told us—we would have to trust the Varn to see for us and speak for us and not deceive us as we went across the galaxy. And then, in the end, Terrans would no longer be needed except as a subject race. They would be enslaved.

"We would have laid the groundwork for an empire—the Varn Empire."

There was a silence, in which his words hung like something cold and invisible between them.

Then the Varn asked, very quietly:

"Why is the Plan failing?"

"You already know," he said. "Because of the barrier—the communication barrier that causes aliens to misunderstand the intentions of Exploration men and fear them."

"There is no communication barrier between you and I—yet you fear me and are going to kill me."

"I have to kill you. You represent a danger to my race."

"Isn't that the same reason why alien kill Exploration men?"

He did not answer and its thought came, quickly, *"How does an Exploration man appear to the natives of alien worlds?"*

How did he appear? . . . He landed on their world in a ship that could smash it into oblivion; he stepped out of his ship carrying weapons that could level a city; he represented irresistible power for destruction and he trusted no one and nothing.

And in return he hoped to find welcome and friendship and co-operation . . .

"There," the Varn said, *"is your true barrier—your own distrust and suspicion. You, yourselves, create it on each new world. Now you are going to erect it between my race and yours by killing me and advising the Exploration Board to quarantine my world and never let another ship land there."*

Again there was a silence as

(Continued on page 33)

The MAROONER

By CHARLES A. STEARNS

ILLUSTRATOR SUMMERS

Wordsley and Captain DeCastros crossed half a universe—suffered hardship—faced unknown dangers; and all this for what—a breath of rare perfume?

STEADILY they smashed the mensurate battlements, in blackness beyond night and darkness without stars. Yet Mr. Wordsley, the engineer, who was slight, balding and ingenuous, was able to watch the firmament from his engine room as it drifted from bow to beam to rocket's end. This was by virtue of bank-



The creature was more pitiful than fearsome.

ed rows of photon collectors which he had invented and installed in the nose of the ship.

And Mr. Wordsley, at three minutes of the hour of seventeen over four, tuned in a white, new star of eye-blinking magnitude and surpassing brilliance. Discovering new stars was a kind of perpetual game with Mr. Wordsley. Perhaps more than a game.

"I wish I may, I wish I might . . ." Mr. Wordsley said.

The fidley hatch clanged. DeCastros, that gross, terrifying clown of a man, clumped down the ladder from the bridge to defeat the enchantment of the moment. DeCastros held sway. He was captain. He did not want Mr. Wordsley to forget that he was captain.

The worst of Captain DeCastros was that he had moods. Just now he was being a sly leprechaun, if one can imagine a double-chinned, three-hundred pound leprechaun. He came over and dug his fingers into Mr. Wordsley's shoulder. A wracking pain in the trapezius muscle.

"The ertholaters are plugged," he said gently. "The vi-lines are giving out a horrible stink."

"I'll attend to it right away," Mr. Wordsley said, wincing a little as he wriggled free.

"Tch, tch," DeCastros said, "can anyone really be so asthenic as you seem, Mr. Wordsley?"

"No, sir," Mr. Wordsley said, uncertain of his meaning.

The captain winked. "Yet

there was that ruffled shirt that I found in the laundromat last week. It was not my shirt. There are only the two of us aboard, Mr. Wordsley."

"It was my shirt," Mr. Wordsley said, turning crimson. "I bought it on Vega Four. I—I didn't know—that is, they wear them like that on Vega Four."

"Yes, they do," DeCastros said. "Well, well, perhaps you are only a poet, Mr. Wordsley. But should you happen to be a little—well, maggoty, you positively do not have to tell me. No doubt we both have our secrets. Naturally."

"I havent," Mr. Wordsley said desperately.

"No? Then you certainly will not mind that I am recommending an Ab Test for you when we get home."

Mr. Wordsley's heart stopped beating for several seconds. He searched Captain DeCastros' face for a sign that he might be fooling. He was not. He looked too pleasant. Mr. Wordsley had always managed to pass the Aberrations Test by the skin of his teeth, but he was sure that, like most spiritual geniuses, he was sensitively balanced, and that the power and seniority of a man like DeCastros must influence the Board of Examination.

"You might be decommmed. Or even committed to an institution. We wouldn't want *that* to happen, would we, Mr. Wordsley?"

"Why are you doing this to

me?" Mr. Wordsley asked strickenly.

"To tell the truth, I do not propose to have any more of my voyages blighted with your moon-calfing, day-dreaming and letting the etholaters stink up the bridge. Besides—" Captain DeCastros patted his shoulder almost affectionately. "—besides, I can't stand you, Mr. Wordsley."

Mr. Wordsley nodded. He went over to the screen that was like a window of blessed outer night and sank down on his knees before it.

Have the wish I wish tonight.

"Ah, ha!" DeCastros exclaimed with sudden ice frozen around the rim of his voice. "What have we here?"

"A new nova," Mr. Wordsley answered sullenly.

"It is common knowledge that no engineer can tell a nova from the D.R. blast of an Iphonian freighter. Let me see it." He shoved Mr. Wordsley out of the way and examined the screen intently.

"You fool," he said at last, "that's a planet. It is Avis Solis."

Now the name of Avis Solis tingled in Mr. Wordsley's unreliable memory, but it would not advance to be recognized. What planet so bright, and yet so remote from any star by angular measurement?

"Turn it off," DeCastros ordered.

Mr. Wordsley turned on him

in a sudden fury. "It's mine," he cried. "I found it! Go back to your bridge." Then, aghast at what he had said, he clapped his hand over his mouth.

"Dear me," said Captain DeCastros silkily. Suddenly he seemed to go quite berserk. He snatched a pile-bar from its rack and swung it at the screen. The outer panel shattered. The screen went dead.

Mr. Wordsley grabbed at the bar and got hold of it at the expense of a broken finger. They strained and tugged. The slippery cadmium finally eluded both of them, bounded over the railing into the pit, struck a nomplate far below and was witheringly consumed in a flash of blue flame.

Then they were down and rolling over and over, clawing and gouging, until Captain DeCastros inevitably emerged upon top.

Mr. Wordsley's eyes protruded from that unbearable weight, and he wished that there was no such thing as artificial gravity. He struggled vainly. A bit of broken glass crunched beneath his writhing heel. He went limp and began to sob. It was not a very manly thing to do, but Mr. Wordsley was exercising his poetic license.

"Now then," said DeCastros, jouncing up and down a bit. "I trust that you have come to understand who is master of this ship, Mr. Wordsley?"

His addressee continued to weep silently.

After awhile it occurred to Captain DeCastros that what he was doing was expressly forbidden in the Rules of the Way, Section 90-G, and might, in fact, get him into a peck of trouble. So he got up, helped Mr. Wordsley to his feet, and began to brush him off.

In a kindly voice he said, "You must have heard of Avis Solis."

"I don't seem to remember it," Mr. Wordsley said.

"It's a solitaire. One of those planets which depend upon dark, dwarf, satellite suns for heat, you know. It is almost always in eclipse, and I, for one, have always been glad of it."

"Why is that?" said Mr. Wordsley, not really caring. His chest was giving him considerable pain.

"Because it holds the darkest of memories for me. I lost a brother on Avis Solis. Perhaps you have heard of him. Malmsworth DeCastros. He was quite famous for certain geological discoveries on Titan at one time."

"I don't think so."

"You need not be sorry. The wretch was a murderer and a bad sport as well. I need not append that my brother and I were as unlike as night and day—though there is no night and day proper upon Avis Solis, of course. I imagine you would like to hear the story. Then you will undoubtedly understand how it is that I was so upset a moment ago by the sight of Avis Solis, and forgive me."

Mr. Wordsley nodded. A bird-like, snake charmed nod.

"Avis Solis is a planet absolutely unique, at least in this galaxy. In addition to being a solitaire, its surface is almost solidly covered to a depth of several meters with light-gathering layers of crystal which give it the brilliant, astral glow that you saw just now. Its satellite suns contribute hardly any light at all. It contains ample oxygen in its atmosphere, but hardly any water, and so is practically barren. An ill-advised mineralogical expedition brought us to Avis Solis."

"Us?" Mr. Wordsley said.

"There were six of us, five men and a woman. A woman fine and loyal and beautiful, with the body of a consummate goddess and the face of a tolerant angel. I was astrological surveyor and party chief."

"I didn't know that you were once a surveyor."

"It was seventeen years ago, and none of your business besides."

"What happened then?"

"Briefly, we were prospecting for ragnite, which was in demand at the time. We had already given up hopes of finding one gram of that mineral, but decided to make a last foray before blasting off. My brother, Malmsworth, stayed at our base camp. Poor Jenny—that was her name—remained behind to care for Malmsworth's lame ankle."

Captain DeCastros was lost

for several minutes in a bleak and desolate valley of introspection wherein Mr. Wordsley dared not intrude. There was a certain grandeur about his great, dark visage, his falciform nose and meaty jowls as he stood there. Mr. Wordsley began to fidget and clear his throat.

DeCastros glared at him. "They were gone when we returned. Gone, I tell you! She, to her death. Malmsworth—well, we found *him* three hours later in the great rift which bisects the massive plateau that is the most outstanding feature of the regular surface of Avis Solis. At the end of this rift there is a natural cave that opens into the sheer wall of the plateau. Within it is a bottomless chasm. It was here that we found certain of Jenny's garments, but of Jenny, naturally, there was no trace. He had seen to that."

"Terrible," Mr. Wordsley said.

DeCastros smiled reminiscingly. "He fled, but we caught him. He really had a lame ankle, you know."

The mice of apprehension scampered up and down Mr. Wordsley's spine. "You killed him." It was a statement of certainty.

"No, indeed. That would have been too easy. We left him there with one portable water maker and all of that unpalatable but nourishing fungus which thrives upon Avis Solis that he could eat. I have no doubt that he lived until madness reduced his ability to feed himself."

"That was drastic," Mr. Wordsley felt called upon to say. "Perhaps—perhaps it occurred to you later on that, in charity to your brother, the er—woman might not have been altogether blameless."

For a moment he thought that Captain DeCastros was about to strike him again. He did not. Instead he spat at Mr. Wordsley. He had the speed of a cobra. There was not time to get out of the way. Mr. Wordsley employed a handkerchief on his face.

"She was my wife, you know, Mr. Wordsley," Captain DeCastros said pleasantly.

At nineteen-over-four the contamination buzzers sounded their dread warning.

Mr. Wordsley got the alarm first. He had been furtively repairing the viewscreen and thinking dark thoughts the while. There was sick dread for him in the contemplation of the future, for after this last unfortunate blunder DeCastros would be certain to keep his promise and have him examined. This might very well be his last voyage, and Mr. Wordsley had known for quite a long time that he could not live anywhere except out here in the void.

Only in space, where the stars were like diamonds. Not in the light of swirling, angry, red suns, not upon the surface of any planet, so drab when you drew too near. Only in the sterile purity of remote space where

he could maintain and nourish the essential purity of his day-dreams. But of course one could not explain this to the Board of Examiners; least of all to Captain DeCastros.

Moreover, he was afraid that Avis Solis, which he had been permitted to behold for only a few seconds, would be out of range before he got the scanner to working again. The aspect of this magnificent gem diminishing forever into the limitless night brought a lump to his throat.

But then, at last, the screen came alive once more, and there it loomed, more brilliant than ever, now so huge that it filled the screen, and it had not become drab, neither gray-green or brown. No, it was cake frosting, and icicles, and raindrops against the sun, and all of the bright, unattainable Christmas tree ornaments of his childhood.

So rapt was he that he scarcely heard the alarm. Yet he responded automatically to the sound that now sent him scrambling into his exposure suit. He fitted one varium-protected oxy-tank to his helmet and tucked another one under his arm for Captain DeCastros.

This was superfluous, for DeCastros not only had donned his rig; he had managed to recall to memory a few dozen vile, degrading swear words gleaned from the sin-pits of Marronn, to hurl at Mr. Wordsley.

No one could have helped it, really. Ships under the Drive are

insulated from contamination clouds and everything else in normal space. The substance polluting the ventilation system, therefore, must have been trapped within their field since Vega. Now it had entered the ship through some infinitesimal opening in the hull.

It was the engineer's job to find that break. It was not easy, especially with DeCastros breathing down one's neck. Mr. Wordsley began to perspire heavily, and the moisture ran down and puddled in his boots.

An hour passed that was like an age. The prognosis became known and was not reassuring. This was one of the toxic space viruses, dormant at absolute zero, but active under shipboard conditions. A species, in fact, of the dread, oxygen-eating *dryorus*, which multiplies with explosive rapidity, and kills upon penetration of the human respiratory system.

Because of the leak in the hull, the decontaminators could not even hold their own. Mr. Wordsley shuddered to note that ominous, rust-colored cobwebs—countless trillions of *dryori*—already festooned the stringers of the hull.

Another precious hour was taken from them. Mr. Wordsley emerged wearily from the last inspection hole.

"Well?" DeCastros snapped. "Well—well?" His face was greenish from the effects of the special, contamination resistant

mixture that they were breathing.

"I found the leak," Mr. Wordsley said.

"Did you fix it?"

"It was one of the irmium alloy plugs in the outer hull beneath the pile. They were originally placed there, I believe, for the installation of a radiation tester. The plug is missing, and I am sorry to say that we have no extras. Anything other than irmium would melt at once, of course."

"We have less than eight hours of pure air in the tanks," DeCastros said. "Have you thought of that, you rattle-head?"

"Yes, sir," Mr. Wordsley said. "And if I might be allowed to speculate, Captain, I would say that we are finished unless we can make a planetfall. Only then would I be able to remove the lower port tube, weld the cavity, seal the ship and fumigate."

"We're four weeks from the nearest star, Fomalhaut; you know that as well as I do."

"I was thinking," said Mr. Wordsley, with a sudden, suffused glow in his cheeks, "of Avis Solis."

Mr. Wordsley shut his eyes as they were going down, because he wanted to open them and surprise himself, at the moment of landing. But the cold, white glare was more intense than he had expected, and he had to shut them again and turn on the polarizer.

He buckled on his tools and

the carbo-torch, and went down the ladder. He dropped at once to his knees, not because of the gravity, which was not bad, but because of a compulsion to get his face as near to the surface of Avis Solis as possible. It was even lovelier than when seen from space. He trod upon a sea of diamonds. A million tiny winkings and scintillations emanated from each crystal. A million crystals lay beneath the sole of his boot. He would rather not have stepped on them, but it could not be helped. They were everywhere. Mr. Wordsley gloated.

DeCastros dropped like a huge slug from the ladder behind him. "What are you doing?" he said. "Picnicking?"

"I was tieing my shoe," Mr. Wordsley said, and got to work with an alacrity that was wholly false.

The dark sun-satellites rose by twos and threes over the horizon, felt rather than clearly seen. There was a dry wind that blew from the glittering wasteland and whistled around the base of the rockets as Mr. Wordsley labored on and on.

Captain DeCastros had withdrawn to a level outcropping of igneous rock and sat staring at the nothing where the greenish-black sky met the pale gray horizon.

The tube was loosened on its shackles and presently fell, with a tinkling sound, upon the surface of Avis Solis. The opening

was sealed and welded. Mr. Wordsley was practically finished, but he did not hurry. Instead, he went around to the opposite side of the ship on a pretense of inspection, and sat down where DeCastros could not see him.

For awhile he stared at the many-faceted depths of the crystals; then he leaned over and touched them with his lips. They were smooth and exciting. They cut his lip.

But he had the distinct feeling that there was something wrong with this idyll. It seemed to him that he was being spied upon. He sneaked a furtive glance behind him. DeCastros was still sitting where he had been, with his back to him.

Mr. Wordsley slowly lifted his gaze to the plateau of shimmering glass that was before him. At its rim, a hundred feet above him, a silent figure stood gazing down upon him.

A man even six feet tall might easily have frightened Mr. Wordsley into a nervous breakdown by staring at him with that gaunt, hollow-eyed stare, but this creature, though man-like, was fully fifty feet tall, incredibly elongated, and stark naked. Its hair was long and matted; its cheeks sunken, its lips pulled back in an expression which might have been anything from a smile to a cannibalistic snarl.

Mr. Wordsley cried out.

Captain DeCastros heard and

came running across the intervening distance with swiftness incredible in one of his bulk at this gravity. His blitzer was out. It was one of the very latest models of blizzers. Very destructive. Mr. Wordsley had always been afraid to touch it.

He fired, and part of the plateau beneath the titan's feet fell away in a sparkling shower. The creature vanished.

DeCastros was red-faced and wheezing. "That was Malmsworth," he said. "Now how the devil do you suppose he managed to stick it out all these years!"

"If that was Malmsworth," Mr. Wordsley said, "he must be a very tall man."

"That was merely dimensional mirage. Come along. We'll have to hurry if we catch him."

"Why do we want to catch him?" Mr. Wordsley said.

Captain DeCastros made a sound of sober surprise. Even of pious wonder. "Malmsworth is my only brother," he said.

Mr. Wordsley wanted to say, "Yes, but you shot at him." He did not, because there was no time. He had to hurry to catch up with DeCastros, who was even now scrambling up the steep slope.

From the rim they could see Malmsworth out there on the flat. He was making good time, but Captain DeCastros proceeded to demonstrate that he was no mean hiker, himself. Mr. Wordsley's side began to hurt, and his breath came with difficulty. He might have died, if he

had not feared to incur DeCastros' anger.

At times the naked man was a broad, flat monster upon that shimmering tableland. Again he seemed almost invisible; then gigantic and tenuous.

Presently he disappeared altogether.

"Oho!" DeCastros said, "If I am not mistaken, old Malmsworth has holed up in that very same rift where we caught him at his dirty business seventeen years ago. He's as mad as a Martian; you can lay to that. He'd have to be."

The rift, when they arrived at its upper reaches, was cool and shadowy. In its depths nothing sparkled. It was ordinary limestone. The walls were covered with a dull yellow moss, except for great, raw wounds where it had been torn off.

"That's Malmsworth's work," Captain DeCastros said. "In seventeen years, Mr. Wordsley, one will consume a lot of moss, I daresay. Shall we descend?"

The rift had reached its depth quite gradually, so that Mr. Wordsley scarcely realized that they were going down until the surface glare was suddenly gone, and the green-walled gloom surrounded them. It might have been a pleasant place, but Mr. Wordsley did not like it.

Captain DeCastros was taking his time now, resting frequently. There was not the slightest chance of Malmsworth's getting away, for at the other end of the rift lay the cave and the abyss

containing, at least, one ghost of Malmsworth's terrible past.

But though it might seem drab after the plateau and the plain, the rift had its points of interest. Along the walls, everywhere, as high as a tall man might reach, the moss had been torn or scraped from the surface. There was no second growth.

Every quarter of a mile or so they came upon the former campsites of the castaway, each marked by a flat-topped cairn of small stones three or four feet in height. DeCastros was at a loss to explain this. Mr. Wordsley supposed that it was one of the marks of a diseased mind.

Not that he actually understood the workings of a diseased mind. Privately, he suspected that DeCastros was a little mad. Certainly he was subject to violent, unreasonable tempers which could not be explained. The unfortunate strain might have cropped up more strongly in his brother.

Might not these walls have rung with lunatic screams after months and years of hollow-eyed watching for the ship that never came? It might have been different, of course, had Malmsworth been able to appreciate the aesthetic values of life, as Mr. Wordsley did. But doubtless these lovely miles and miles of crystalline oceans had been but a desert to the castaway.

Eventually the rift widened a little, and they came to a dead end, beyond which lay the cave.

It must have been formed ages ago by trickling waters before Avis Solis lost its clouds and rivers.

Here they found the last of the cairns, and the answer to their construction. The water-maker which the expedition had left with Malmsworth seventeen years ago rested upon this neat platform, and below it a delicate basin, eighteen inches or so in depth, had been constructed of stones and chinked with moss. Fit monument for the god, machine.

It was filled with water, and quite obviously a bathtub.

Captain DeCastros sneered. This proved beyond doubt that Malmsworth was mad, for in the old days he had been the very last to care about his bath. In fact, DeCastros said, Malmsworth occasionally stank.

This was probably not true, but it seemed curious, nonetheless.

Captain DeCastros set to work kicking the tub to pieces. He kicked so hard that one stone whistled past the head of Mr. Wordsley, who ducked handily. Soon the basin lay in rubble, and the water-maker, its supports collapsed, listed heavily to the right.

"He must be in the cave," Captain DeCastros said. He cupped his hands to his mouth. "Come out, Malmsworth, we know you're in there!"

But there was no answer, and Malmsworth did not come out,

so Captain DeCastros, blizzer in hand, went in, with Mr. Wordsley following at a cautious interval.

Presently they stood upon the edge of something black and yawning, but there was still no sign of the exile, who seemed, like Elijah, to have been called directly to his Maker without residue.

Beyond the gulf, however, Mr. Wordsley had glimpsed a ragged aperture filled with the purest light. It seemed inconceivable to him—attracted as he had always been by radiance—that this should be inaccessible.

Accordingly, he lay down upon his belly and stretched his hand as far down as he could reach. His fingers brushed a level surface which appeared to extend outwards for two or three feet. gingerly he lowered himself to this ledge and began to feel his way along the wall. Nor was he greatly surprised (for hardly anything surprised Mr. Wordsley any more) that it neatly circumnavigated the pit and deposited him safely upon the other side, where he quickly groped toward the mouth of the cavern and stood gazing out upon a scene that was breathtaking.

From this vantage the easily accessible slope led to the foot of the plateau. Beyond lay the grandeur of Avis Solis.

Captain DeCastros was soon beside him. "A very clever trick, that ledge," he said. "Malmsworth

(Continued on page 143)



WHY?

By BERTRAM A. CHANDLER

ILLUSTRATED BY LLEWELLYN

Before a writer starts to work on his typewriter he has to decide whether he will write fact or fiction. Therefore he must know one from the other and sometimes this last is more difficult than it appears.

SO WE'VE done it," he said. "We've done it. This is the first step to the stars."

"You said the same," his wife reminded him, "about the V2."

"Did I? I can't remember. Anyhow, we've done it now."

"We?" she asked. "We? We, my dear, are English. We, the English, aren't doing anything

at all about artificial satellites. The Russians have beaten the Americans to it. What has that to do with us?"

"By 'we,'" he said stiffly, "I meant the human race. Mankind. We've done it. We've slung a tiny sphere jam-packed with instruments clear of the Earth so that it's fallen into its own orbit. It'll not be long before we do the same with a larger sphere, carrying a human crew. It'll not be long before we land the first rocket on the moon."

"And what will you science fiction writers do then?" she asked.

"There're still the planets. And the stars . . . Anyhow," he said, reaching for the decanter, "I think this calls for another drink."

"Any excuse being better than none," she said.

"I'll drink," he said, "to all those who can no longer annoy the likes of us by asking, 'But what does it push against?' This has made it obvious that a rocket can and will function in airless space. I'll even drink—I'm in a magnanimous mood—to those who still say, 'But it's against Nature.' Damn it all, Man's existence from the very beginning has been one long fight against Nature."

"As long as it makes you happy," she said.

"You don't seem very enthusiastic," he remarked.

"Why should I be? I'm a woman, and women are the more practical sex. Will this artificial

satellite of yours—or the Russians'—put more food on more tables, more roofs over more heads? Will it do anything to avert war—or will it have the opposite effect?"

"In the long run," he said, "yes. Yes, that is, to the first three questions. Look at it this way—we don't know, we just don't know, what we shall find of commercial value on Mars or Venus, any more than Columbus knew what would be found in the New World. Oh, he hoped for gold and pearls and spices and all the rest of it, and they were found—but he could never have foreseen the vast, commercial empire that would grow around the tobacco leaf."

"He could never have foreseen lung cancer either," she said.

"It's what you light what you smoke with that does the damage," he argued. "The average city dweller is more liable to lung cancer than the average country dweller. The air of the average city is polluted with the by-products of the combustion of petrol. The average cigarette smoker is more liable to lung cancer than the average pipe smoker. The average cigarette smoker uses a lighter-burning petrol, or something like it; the average pipe smoker uses matches."

"I know only too well," she said. "Must you *always* use the kitchen matches?"

"We seem to have drifted a long way from the satellite," he

said. "Let's get back to the woman's viewpoint. Why is it, I wonder, that women are always leary of Progress—except, of course, when said Progress has a direct, obvious and immediate effect upon their comfort?"

"I suppose," she admitted, "it's because it's against Nature."

"Interesting. I mean it, darling. It's time that I got down to some work, and you've given me an idea to kick around and play with. Flecker raised the point in his *The Golden Journey to Samarkand*. Remember? How did he say it?

*'We are the pilgrims, Master,
we shall go
Always a little further; it may
be
Across that last, blue mountain
rimmed with snow,
Across that angry or that
glimmering sea . . .'*

"You remember the thing, don't you? The Caravan setting out from Baghdad to . . . to divine Bokhara, happy Samarkand and the cities of the South . . . And at the finish the women getting rather hostile about their husbands and boyfriends and whatever leaving them, and the Gatekeeper saying:

*'Take courage, ladies, it was
ever thus,
Men are unwise and curiously
planned . . .'*

"And the women replying:

*'They have their dreams, and do
not think of us . . .'*

"And just what connection," she asked, "has the satellite with the Golden Road to Samarkand?"

"I'm coming to that. Men have their dreams. The science fiction writers have been peddling dreams for years now—before them it was the writers of highly imaginative romances about imaginary voyages. Herodotus was one such. On the one hand we've had the dream peddlers, on the other hand we've had the customers who, inspired by the dreams, have gone dashing off to discover America, to try to find the North West Passage, to reach the North and the South Poles, to climb Mount Everest, to fly to the moon. (That'll not be long now.) I'm not claiming that the dream peddlers are responsible for the explorations and discoveries, but I am saying that both the dreaming of dreams and the going out to try to make them come true are against Nature. For example—what animal in his right senses, or out of them, would try to climb Mount Everest?"

"An Abominable Snowman," she said.

"Then put it this way—what Abominable Snowman would ever feel the urge to find the source of the Nile?"

"There must be thousands of Esquimaux who've never felt the urge either," she said, "just

as there must be millions of Negroes who would be left cold by the suggestion that they engage in Arctic exploration . . . ”

“What I’m trying to say,” he insisted, “is this. Man is the only animal who has dreams . . . ”

“What about dogs?”

“I mean *real dreams*, not just dreams of hunting rabbits.”

“How do you know that a dog only dreams of hunting rabbits?”

“Because if a dog dreamed *real dreams* he’d try to convert them into realities.”

“Dogs have gone to the South Pole.”

“Not because they wanted to. And if they’d known that they were going to be eaten by Amundsen they’d have wanted to still less. Anyhow, this is the point that I’m trying to make. Man’s behavior is most unnatural inasmuch as he will dream of glamorous things and then, having dreamed of them, try to put his dreams into practice. Oh, I know that it can be explained away by attributing it to the principles of sexual selection—but that’s so much hogwash. A woman wants one thing above all else—security. And security is what she’ll get with, say, a bank manager; not with a Polar explorer, a mountaineer or a spaceman.”

“Oh,” she added acidly, “a writer, especially a science fiction writer.”

“You may have something there. But what I’m driving at

is this—the exploratory urge that has pushed Man all over the surface of his own planet may well come from Outside.”

“From *Outside*?” she asked.

“Yes. Outside. From—shall we say?—the moon. The purpose of it all is so that Man shall, eventually, leave his own world to make the voyage to the world of the . . . the Outsiders. The Lunarians? Yes, I’ll make it Lunarians. For some reason they want us on the moon. They’re long-lived, practically immortal, and patient to match. They’ve been pushing the idea—telepathically?—ever since we first came down from the trees and built the first fire.”

“Why?”

“There must be a reason. There *will* be a reason when I get the story written. . . . Let’s look at it this way. They can’t come to us. It could be that their world is so deficient in metals that the construction of machines is impossible. It could be that their science, in consequence, has run on altogether different lines from ours. It could be that they are capable of exercising a hypnotic influence over two hundred and forty thousand miles. After all—it’s not far . . . ”

“But *why* do they want men on the moon?”

“They’re an old race,” he said. “Incredibly old. They might have had physical bodies once, but they’ve evolved, and now they’re hardly more than disembodied ghosts, pure intellect. Or

perhaps they *are* ghosts—there's no reason why I shouldn't make this fantasy rather than science fiction. Somehow, for some reason, they're tied to the surface of their dead world. Or they live in caverns, perhaps, or in the craters. They don't like it. They want to live again—to live in young, healthy physical bodies. They want, perhaps, to take this planet over, possessing the bodies of all its human inhabitants. But they can't leave the moon under their own steam.

"They've been patient, as I've said. Over the millennia they've foisted upon Man this utterly unnatural urge to explore, to find out what's over the last frontier. Latterly they've managed to do things on their own world—they must have some slight control over physical forces—to stimulate Man's interest in the moon. There have been the unexplained mists in some of the craters, the famous bridge that seemed suddenly to appear, the way in which the crater Linnaeus suddenly became a prominent, luminous object and then faded again into obscurity . . .

"They must be feeling pleased with themselves now. It's only a short time to wait for the payoff. Only a short time as they consider time. Within a decade or two the first rocket, with its crews of fresh, young Americans or Russian boys will drop down to the pumice dust on its flaring exhausts—and then *they* will take charge. Perhaps they will

be able to pack their entire population into the brains of those astronauts, so that when the return to Earth is made they can take over with the minimum delay . . ."

"What a horrid mind you have," she said.

"It's part of my stock in trade, darling. Anyhow, how do you know that what I've been telling you is a product of *my* mind? It could be that all of us science fictioneers are in some sort of rapport with the Lunarians, and that we have been, in effect, mere machines for turning out their propaganda in favor of space travel. It could be that they're feeling so pleased now that the first real step has been made, by *us*, towards the furtherance of *their* schemes that something of what they're feeling has filtered through to me.

"Anyhow, that's the story, and that's the way that I'm going to write it."

"Will *they* let you?" she asked, falling in with his mood. "After all, if they can dictate stories over two hundred and forty thousand miles they can do other things as well. Lethal things."

"You've been reading too much science fiction, darling," he said.

"Going to help with the washing up?"

"Sorry, no. I want to get the idea down on paper while it's still hot."

"As you please," she said. He got out his typewriter, manuscript paper and carbon paper, set them up on his work table. She went through to the kitchen, busied herself with the accumulation of dishes in the sink. After a little while she became uneasy; his typewriter was far from new and far from noiseless yet, save for a brief, preliminary clatter that must have been the writing of the title, no familiar rattle of keys had broken the silence.

She screamed when she saw him huddled over the table. She

knew, somehow, that he was dead. He toppled sideways when she touched him, falling to the floor. Somehow, even then, she found herself reading the one word that was typed at the head of the sheet of paper in the machine: WHY.

But she was a woman, and literal minded, and she never knew why, not even when the doctor admitted to her, some days later, that it was a mystery to him why a man in the best of health should die of heart failure.

THE END

CRY FROM A FAR PLANET

(Continued from page 17)

he thought of what the Varn had said and of what it had said earlier: *We are a very old race . . . There was wisdom in the Varn's analysis of the cause of the Plan's failure and with the Varn to vanquish the communication stalemate, the new approach could be tried. They could go a long way together, men and Varn, a long, long way . . .*

Or they could create the Varn Empire . . . and how could he know which it would be?

How could anyone know—except the telepathic Varn?

The muzzle of the blaster had dropped and he brought it back up. He forced the dangerous indecision aside, knowing he would have to kill the Varn at once or he might weaken again, and said harshly to it:

"The risk is too great. I want

to believe you—but all your talk of trust and good intentions is only talk and my race would be the only one that had to trust."

He touched the firing stud as the last thought of the Varn came:

"Let me speak once more."

He waited, the firing stud cold and metallic under his finger.

"*You are wrong. We have already set the example of faith in you by asking to go with you. I told you we did not intend to hurt your brother and I told you we saw the stars only as the little wild animals saw them. The years in the dark caves—you do not understand—*"

The eyes of the Varn looked into his and beyond him; beautiful, expressionless, like polished gold.

"*The Varn are blind.*"

THE END

WHY?

33

The Gift Bearer

By CHARLES L. FONTENAY

This could well have been Montcalm's greatest opportunity; a chance to bring mankind priceless gifts from worlds beyond. But Montcalm was a solid family man—and what about that nude statue in the park?

IT WAS one of those rare strokes of poetic something-or-other that the whole business occurred the morning after the stormy meeting of the Traskmore censorship board.

Like the good general he was, Richard J. Montcalm had foreseen trouble at this meeting, for it was the boldest invasion yet into the territory of evil and laxity. His forces were marshaled. Several of the town's ministers who had been with him on other issues had balked on this one, but he had three of them present, as well as heads of several women's clubs.

As he had anticipated, the irresponsible liberals were present to do battle, headed by red-haired Patrick Levitt.

"This board," said Levitt in his strong, sarcastic voice, "has gone too far. It was all right to

get rid of the actual filth . . . and everyone will agree there was some. But when you banned the sale of some magazines and books because they had racy covers or because the contents were a little too sophisticated to suit the taste of members of this board . . . well, you can carry protection of our youth to the point of insulting the intelligence of adults who have a right to read what they want to."

"You're talking about something that's already in the past, Mr. Levitt," said Montcalm mildly. "Let's keep to the issue at hand. You won't deny that children see this indecent statue every day?"

"No, I won't deny it!" snapped Levitt. "Why shouldn't they see it? They can see the plate of the original in the encyclopaedia. It's a fine copy of a work of art."

Montcalm waited for some rebuttal from his supporters, but none was forthcoming. On this matter, they apparently were unwilling to go farther than the moral backing of their presence.

"I do not consider the statue of a naked woman art, even if it is called 'Dawn,'" he said biting-ly. He looked at his two colleagues and received their nods of acquiescence. He ruled: "The statue must be removed from the park and from public view."

Levitt had one parting shot.

"Would it solve the board's problem if we put a brassiere and panties on the statue?" he demanded.

"Mr. Levitt's levity is not amusing. The board has ruled," said Montcalm coldly, arising to signify the end of the meeting.

That night Montcalm slept the satisfied sleep of the just.

He awoke shortly after dawn to find a strange, utterly beautiful naked woman in his bedroom. For a bemused instant Montcalm thought the statue of Dawn in the park had come to haunt him. His mouth fell open but he was unable to speak.

"Take me to your President," said the naked woman musically, with an accent that could have been Martian.

Mrs. Montcalm awoke.

"What's that? What is it, Richard?" she asked sleepily.

"Don't look, Millie!" exclaimed Montcalm, clapping a hand over her eyes.

"Nonsense!" she snapped,

pushing his hand aside and sitting up. She gasped and her eyes went wide, and in an instinctive, unreasonable reaction she clutched the covers up around her own nightgowned bosom.

"Who are you, young woman?" demanded Montcalm indignantly. "How did you get in here?"

"I am a visitor from what you would call an alien planet," she said. "Of course," she added thoughtfully, "it isn't alien to me."

"The woman's mad," said Montcalm to his wife. A warning noise sounded in the adjoining bedroom. Alarmed, he instructed: "Go and keep the children out of here until I can get her to put on some clothes. They mustn't see her like this."

Mrs. Montcalm got out of bed, but she gave her husband a searching glance.

"Are you sure I can trust you in here with her?" she asked.

"Millie!" exclaimed Montcalm sternly, shocked. She dropped her eyes and left the room. When the door closed behind her, he turned to the strange woman and said:

"Now, look, young lady, I'll get you one of Millie's dresses. You'll have to get some clothes on and leave."

"Aren't you going to ask me my name?" asked the woman. "Of course, it's unpronounceable to you, but I thought that was the first thing all Earth people asked of visitors from other planets."

"All right," he said in exasperation. "What's your name?"

She said an unpronounceable word and added: "You may call me Liz."

Montcalm went to the closet and found one of Millie's house dresses. He held it out to her beseechingly.

As he did so, he was stricken with a sudden sharp feeling of regret that she must don it. Her figure . . . why Millie had never had a figure like that! At once, he felt ashamed and disloyal and sterner than ever.

Liz rejected the proffered garment.

"I wouldn't think of adopting your alien custom of wearing clothing," she said sweetly.

"Now look," said Montcalm, "I don't know whether you're drunk or crazy, but you're going to have to put something on and get out of here before I call the police."

"I anticipated doubt," said Liz. "I'm prepared to prove my identity."

With the words, the two of them were no longer standing in the Montcalm bedroom, but in a broad expanse of green fields and woodland, unmarred by any habitation. Montcalm didn't recognize the spot, but it looked vaguely like it might be somewhere in the northern part of the state.

Montcalm was dismayed to find that he was as naked as his companion!

"Oh, my Lord!" he exclaimed,

trying to cover himself with a September Morn pose.

"Oh, I'm sorry," apologized Liz, and instantly Montcalm's pajamas were lying at his feet. He got into them hurriedly.

"How did we get here?" he asked, his astonished curiosity overcoming his disapproval of this immodest woman.

"By a mode of transportation common to my people in planetary atmospheres," she answered. "It's one of the things I propose to teach your people."

She sat down cross-legged on the grass. Montcalm averted his eyes, like the gentleman he was.

"You see," said Liz, "the people of your world are on the verge of going to space and joining the community of worlds. It's only natural the rest of us should wish to help you. We have a good many things to give you, to help you control the elements and natural conditions of your world. The weather, for example . . ."

Suddenly, out of nowhere, a small cloud appeared above them and spread, blocking out the early sun. It began to rain, hard.

The rain stopped as suddenly as it had begun and the cloud dissipated. Montcalm stood shivering in his soaked pajamas and Liz got to her feet, her skin glistening with moisture.

"You have a problem raising food for your population in some areas," she said . . .

A small haw-apple tree near them suddenly began to grow at an amazing rate of speed. It

doubled its size in three minutes, put forth fruit and dropped it to the ground.

"These are only a few of the things I'll give to your planet," she said.

At her words, they were back in the bedroom. This time she had been thoughtful. Montcalm was still clad in wet pajamas.

"I don't know what sort of hypnosis this is," he began aggressively, "but you can't fool me, young lady, into believing . . ."

Millie came into the room. She had donned a robe over her nightgown.

"Richard, where have you been with this woman?" she demanded.

"Why, my dear . . ."

"You've been roaming around the house somewhere with her. I came in here a moment ago and you were gone. Now, Richard, I want you to do something about her and stop fooling around. I can't keep the children in their room all day."

It hadn't been hypnosis then! Liz was for real. A vision rose before Montcalm of mankind given wonders, powers, benefits representing advances of thousands of years. The world could become a paradise with the things she offered to teach.

"Millie, this woman is from another planet!" he exclaimed excitedly, and turned to Liz. "Why did you choose me to contact on Earth?"

"Why, I happened to land near

your house," she answered. "I know how your primitive social organization is set up, but isn't one human being just as good as another to lead me to the proper authorities?"

"Yes," he said joyfully, visualizing black headlines and his picture in the papers.

Millie stood to one side, puzzled and grim at once. Montcalm picked up the house dress he had taken from the closet earlier.

"Now, Miss," he said, "if you'll just put this on, I'll take you to the mayor and he can get in touch with Washington at once."

"I told you," said Liz, "I don't want to adopt your custom of wearing clothing."

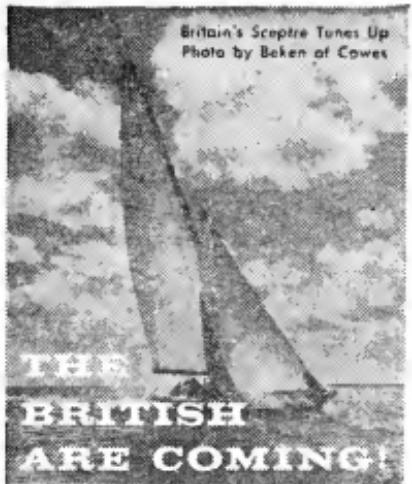
"But you can't go out in public like that!" said the dismayed Montcalm. "If you're going to move among Earth people, you must dress as we do."

"My people wouldn't demand that Earth people disrobe to associate with us," she countered reasonably.

Millie had had enough. She went into action.

"You can argue with this hussy all you like, Richard, but I'm going to call the police," she said, and left the room with determination in her eye.

The next fifteen minutes were agonizing for Montcalm as he tried futilely to get Liz to dress like a decent person. He was torn between realization of what the things she offered would mean to the world and his own sense of the fitness of things.



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His children, the children of Traskmore, the children of the world . . . what would be the effect on their tender morals to realize that a sane adult was willing to walk around in brazen nakedness?

There was a pounding on the front door, and the voice of Millie inviting the law into the house.

"Now I'm afraid you're due to go to jail," said Montcalm mournfully. "But when they get some clothes on you, I'll try to explain it and get you an audience with the mayor."

Two blueclad policemen entered the room.

One policeman took the house dress from Montcalm's lax fingers and tossed it over Liz' head without further ado.

Liz did not struggle. She looked at Montcalm with a quizzical expression.

"I'm sorry," she said. "My people made a mistake. If you Earth people aren't tolerant enough to accept a difference in customs of dress, I'm afraid you're too immature."

With that, she was gone like a puff of air. The astonished policemen held an empty dress.

Montcalm didn't see the flying saucer that whizzed over Traskmore that morning and disappeared into the sky, but he didn't doubt the reports. He debated with himself for a long time whether he had taken the right attitude, but decided he had.

After all, there were the children to consider.

THE END

THE ALTERNATE PLAN

By GERRY MADDREN

The operation was a very serious one and Bart Neely was willing to put himself into Dr. Morton's hands. But if things turned out badly, Bart was going to teach them a lesson. He was going to refuse to die.

BART NEELY was fighting the hypo. They'd slipped that over on him. Now he had to struggle to keep his brain ready for plan B. The alternate plan. He nodded feebly at his reflection in the mirror over the white enamel dresser. This throat-trouble wasn't going to lick him. He lay back on the cool white pillow. Medical men always thought theirs was the final answer; well, psychologists like himself knew there was a broader view of man than the anatomical. There was a vast region of energy at man's disposal; the switch to turn it on, located in the brain.

Rubber-soled shoes squished across the bare floor as Dr. Jonas Morton came into Bart's room. His hair was hidden by a sterile cap, his arms bare to well above the elbows.

Looks like a damned butcher, thought Bart.

"Bart, I want you to reconsider the anesthetic. I think you ought to be out for this one, completely out." The doctor's voice became a shade less professional. "I don't tell you how to run your perception experiments, I think you ought to let me judge what's best in the surgical area."

"No." Bart whispered hoarsely. It was hell squeezing the words out. Lifting his voice these days was harder than lifting a half-ton truck. "Must be conscious, able to decide." Jonas had to lean down to catch all the words. "Not going to let you take my voice while I'm unconscious . . . helpless . . ."

Dr. Morton shook his head. "You're the boss."

"How soon?"

"Twenty minutes." The professional tone became pronounced again. "Your wife's outside waiting to see you. Don't get emotional, I don't want your endocrine system in an uproar." The doctor stepped out into the corridor.

Emotional. He mustn't think about it. He might weaken, consent to linger on, an invalid, just to be with Vivian a few extra years. Extra years of indignities calculated to twist the man-woman relationship into an ugly distortion. How romantic it would be, he and Vivian locked in an embrace, the silky softness of her hair falling across his arm, the pressure of her fingers on his back. And then, instead of placing his mouth against her ear and whispering the familiar intimacies, he would switch on the light, disengage himself so that he could whip out a pad and pencil and . . ." His heart skipped at the sound pattern of high heels on the corridor. Vivian, Vivian. Her perfume pricked his senses and it took effort to shut out the emotional response. "Remember the need for an alternate plan" he reminded himself fiercely and then looked up into his wife's clear green eyes. Without a word she bent down and lay her face next to his. He was struck with the warmth of her. He gently pushed her head away. "Vi," (My Lord, his eyes were wet . . . what a schoolboy performance!) "Vi, you know I don't want to go on here . . . if

radical surgery is necessary. I want you to remember me as a whole man, not a . . . dummy."

"Bart, oh Bart." There was a frown of apprehension on her forehead. She sighed heavily and whispered, "Can it make so much difference when I love you Bart?"

"But don't you see Vi? It may not be Bart Neely they wheel back here after the operation." He motioned for her to bend closer for the sound of his voice was becoming weaker. "In my field I've seen a lot of crazy reactions to loss of basic ability. Personality reversals brought about by loss of hearing, impotency, or even the inability to bear a child." He stroked the back of her hand with his finger. "Bart Neely without a voice-box might be a stranger. I'm not sure you'd like him. I don't think I'd even like him."

An intern backed into the room followed by a guerney. Bart shot a look at Vi. "This is plan A."

Vi's eyebrows arched in a question.

"Exploration and . . ." he paused; the nurse tucked a dark gray blanket all around him. He raised his thin white hand and crossed two fingers . . . "and we hope, a negative biopsy."

There was no pain. Whatever the anesthetist had worked out was doing nicely. The overhead light, however, was giving him a headache and the operating room was damned cold. Jonas

and Holsclaw weren't talking much, and what they did say wasn't loud enough for Bart to get. He studied their faces. "I'll know by their faces," he assured himself, "and if it's widespread malignancy I'll proceed with plan B."

The sweat was heavy on Jonas' forehead. The sterile mask hid his nose and mouth, but his eyes, behind the lenses of his glasses, looked moist and tired. The surgeon's gloved fingers manipulated, probed, cut. Finally, he turned to a waiting nurse.

"Get this analyzed right away." That was it, the tissue . . . was it cancerous or not? The atmosphere grew heavy. Bart watched the second hand on the large wall-clock swing slowly around its perimeter, and then around again and again. The nurse reentered and spoke softly to the doctor. The two doctors whispered, explaining to each other with hand motions what they were going to do.

This is it. Bart was certain. Well, he'd fool the hell out of the know-it-all doctors. He closed his eyes and thought. The years he had spent sharpening his perception, his ability to transfer his thoughts, were just the groundwork for this greatest experiment of all. He had transferred thought waves in all forms to all corners of this world with the highest percentage of accuracy. Now Plan B, the alternate plan, was to transfer himself! He was willing himself out of his own body. He could feel

the perspiration trickle down his arms with the effort. It had to work. He had to cheat them out of their mutilation. No, he couldn't fail. He strained against the confines of his body, burdening his brain with thought, and suddenly he was free. Bart wanted to shriek with laughter. He'd outwitted them. There stood gray-faced Jonas working over that shell, not even realizing that it was an empty body. It was like a television play or something; everyone clustered around a poor stiff on the operating table, repeating the litany of the sawbones. "Scalpel . . . sponge . . . clamps . . ."

Bart mentally chuckled and fluttered himself upwards; above the square-shaped hospital with its rows of tiny windows. Beyond the polluted air of the city. Up and up, until there was nothing to look back on. Nothing.

Now Bart perceived something ahead. It appeared to be a body of land. It looked marvelously appealing, dark greens, bright yellows, and all the shades in between. He hurried forward, eager to explore what lay ahead. But as he drew closer, becoming more excited over its possibilities, he struck a cold hard surface which repelled him. It was like glass and through it Bart could see a poorly defined figure some distance away. Bart was intrigued. This was a mental barrier thrown up by the fellow on the other side. Well, he'd give the guy some competition. Bart

concentrated on cracking the wall, building a visual picture of the break-through in his mind.

"It's useless. You can't enter here."

"Why do you oppose me?" Bart tested the unseen wall, but found no weakness in its structure.

"We don't care for your sort."

"Is that so. And how have you classified me?"

"As a coward. A suicide. A man of meager resources."

"I'm nothing of the kind. In the first place, I did not commit suicide." Bart wished he could kick at the invisible wall. "I willed myself away from an imperfect shell. I severed the mind from the body."

"Why?"

"Because I had cancer of the larynx, and I'd never have been able to talk again. I'd be less than a man."

"You are less than a man now." There was a long period of no exchange. Bart decided he had not made himself clear. "I didn't want to live without being able to communicate with other men and women."

"Communicate. Communicate. There are a million ways to communicate. Michelangelo communicated, Bach, Beethoven, yes, Elvis Presley communicates. Hemmingway, Martha Graham, actors, dancers, even a baby communicates!"

"But speech . . ."

"Speech is the least dependable method of all. Few people

can explain their love, their pain, their innermost feelings in words. And often a man speaks his thoughts, and having spoken them, finds he really thinks the opposite. No, this is second-rate expression and my opinion of you has not been altered by your feeble argument."

The other fellow's thoughts came over the wall, pounding against Bart's sub-conscious. "You consider yourself a man of great intelligence" it went on, "but your lack of imagination makes you less than mediocre. And as for your mind-power, well, you see you cannot cross my mental barrier."

"That's not entirely conclusive. There may be a catalyst here in this area which works in conjunction with your thought-processes and not mine. You're familiar with conditions here, while I only know the earth."

"You are hardly a challenge to me. However, to satisfy you that you have practically no control, let us make a test on your home ground."

"All right. You propose the test."

"Let us see . . . if you can re-enter your former body while I am willing you to stay here, on the other side of that wall."

"Ahah. You're trying to trick me."

"I knew before I proposed my plan you would make exactly that excuse in order to escape my challenge. Even in excuses you lacked imagination."

(Continued on page 144)

BUILD YOUR OWN UNIVERSE

By ELLERY LANIER

Mr. Lanier, a writer of exceptional brilliance, specializes in simplifying highly technical scientific advancements—in making them understandable and interesting. In this, his first article in AMAZING, he tells of Dr. Winston H. Bostick's work at Stevens Institute of Technology. It reads like fiction but it is hard fact.

SCIENCE fiction itself has been skeptical of stories in which a universe is created—but amazing as it seems, the subject of this article, though it verges on pure fantasy, is not even speculation. It is accomplished fact!

As an alternative to studying the skies with a telescope, the heavens can now be studied in a small glass container.

The author has personally discussed "universe creation" with Dr. Winston H. Bostick, head of the Department of Physics at the Stevens Institute of Technology, who invented the device that makes possible this new adventure in science. Dr. Bostick is no mad scientist. He is a perfectly normal, likeable member of the human race, and he is fully aware of the importance of these discoveries. He seriously

recommends that amateur scientists experiment with creating their own universes, as an additional aid to research. He says they can do it!

Dr. Bostick studies the interaction of plasmas (like gas in neon tubes), with magnetic fields. Plasmas resemble the ectoplasm of the spiritualists. They were first seriously studied by Irving Langmuir in 1921. They are produced when an electric discharge knocks electrons from gas atoms until the electron free atoms—ions—and the free electrons make a good conductor. Many strange atmospheric lights are plasma . . .

Dr. Bostick's invention is a "plasma gun" which shoots bursts of high speed plasma through a magnetic field. The results were among the most unexpected phenomena in nature—

miniature galaxies came into birth right in the laboratory!

The plasma ignored all the conventional rules of behavior and came out as tightly knit luminous gas pellets that were visual duplicates of the enormous galaxies photographed by the giant telescopes. These tiny galaxies broadcast the same kind of messages being received by radio telescopes focussed on outer space. More astonishing, calculations based on what are called "Similarity Transformations," revealed that these man-created baby galaxies correspond to the real ones in many ways—the kind and amount of matter in them, the length of their existence, the way they age, and the speed with which they move.

It is not at all inconceivable, that planets exist in these miniature galaxies, and that civilizations are born and then die—all in the flashing instant of the experiment!

Dr. Bostick named these galaxies "Plasmoids." He nonchalantly pockets the little aspirin-sized tablet with which he creates these universes. It is one of the most innocent looking pieces of scientific equipment ever invented!

To create a universe, the plasma gun is fired into a glass container four inches in diameter, from which the air has been partially removed. Around the glass is wound a coil of wire through which a current is passed to create a magnetic

field within the container. As the plasmoid speeds across the magnetic field through the partial vacuum, (simulating outer space), it describes a curved trajectory. When several plasmoids are fired simultaneously toward a center, they trace spiral paths around the common center (like a pair of tadpoles), and eventually form into what looks like a smoke ring.

The plasma gun consists of a pill-sized ceramic button with two wire electrodes embedded in it. The wires are made of Titanium metal with deuterium atoms embedded in it. They are four one hundredths of an inch long with a five one thousandths of an inch gap between them. They are connected to a source of pulsed electric current. The ends of the wire are flush with the face of the ceramic. An electric arc is formed between the ends by forcing through the wires in a fraction of a second (one-half micro-second), electric currents up to 100 amperes. Due to the unusual current density in the arc, the tips of the wires are heated to temperatures high enough to vaporize and ionize (strip of electrons) atoms of both the titanium and deuterium.

These titanium and deuterium ions (particles of matter carrying positive charges) and electrons (matter carrying negative charges) are hurled from the gun at speeds over 450,000 miles per hour. This is the highest speed that matter of such

density—amounting to a flood of atoms—has ever achieved on earth.

Though machines like the cyclotron, betatron, and synchrotron produce higher speeds, they accelerate by comparison only an infinitesimal quantity of particles and these carry electrical charges. The number of ions projected per pulse is in the range of 10^{15} to 10^{18} depending on the peak current and the pulse duration.

If the energy of these high speed ions were expressed as a temperature, the titanium ions would attain 100,000,000 degrees centigrade and the deuterium ions 4,000,000 degrees centigrade. The titanium reaches temperatures approaching those in a thermonuclear explosion.

Instead of coming out as a formless blob the plasma emerges from the two "mouths" in a very odd kind of shape, sort of bent into a loop that was not predicted by theory. The loop turns into an unexpected doughnut shape that goes through strange transformations as an independent self sustaining entity. The plasma generates its own magnetic field which acts like a girdle and pinches the plasma into a slender column. This column sometimes looks like a broomstick and sometimes resembles a flexible bottle. The magnetic force forms membranes of the particles forming the plasma. Just as when a spring is bent, the turns of the wire are crowded closer on the

inside of the loop than on the outside, so the magnetic field lines of the loop or doughnut of plasma emerging from the gun are crowded more on the inside than on the outside. The stronger magnetic pressure on the inside of the loop blows the plasma forward at incredible speeds. The driving energy is stored in a capacitor of only six *joules*—no more than is needed to light a six-watt bulb for one second—a fantastic performance.

The most amazing part of this story is what happens to the plasma bits after they are fired from the gun. Fortunately the plasma leaves a luminous wake. (This is made of sacrificed particles that were drafted to form a track in which the plasma can move.) It can be photographed with a high speed camera. It would be expected that the electrons and the ions in the plasma would be thrown into circular orbits as soon as they enter the externally applied magnetic field, so that the plasma would not move more than a very short distance from the gun.

High speed photographs disclose that contrary to expectations the plasma crosses the magnetic field with ease! The present explanation is that as the plasma starts to move across the magnetic field, the electrons curve upward and the positive ions move downward. This in effect produces an electromotive force, just as copper wires moving across a magnetic field do

in an ordinary dynamo. An electromotive force can be thought of as the electric pressure exerted by an electric pump. If there is no outlet for the pump no current will flow. Similarly this little piece of plasma has no outlet in the vacuum chamber, and no current can flow. Its pump pushes against closed valves, so to speak, and merely creates an electrical pressure opposing that of the pump. Within the plasma frame of reference the direct and opposing electrical fields cancel each other, and the magnetic field swings the electrons and ions in perfectly circular orbits. From the outside it can be seen that the opposing electric field, in conjunction with the magnetic field, moves the orbits, so that the plasma travels across the magnetic field. The particle orbits trace a track such as a marker on the edge of a spinning disk would leave if the disk was moved across a surface while it was turning.

Some of the ions and electrons in the plasma seem to escape the full effect of the electric field and stay behind in stationary circular orbits. These ions and electrons recombine into complete atoms and give off light (like stars). Their luminous tracks are in a manner of speaking, the funeral pyres of the particles which were sacrificed in laying down the electric field so that the main body of the plasma might pass across the magnetic field.

It is actually possible to put two little sensitive probes near the plasma (which is in effect a little dynamo) and draw off current. A pulse is recorded of about one ampere as the two regions of the plasma pass simultaneously over the probe.

Measurements with the probe show the plasma forms an elongating hollow cylinder as it passes over the magnetic field. It is a self-generating, shaped body, that takes on an independent existence after it is fired from the electrodes. It has a measurable magnetism, a measurable speed, a crossing electric field, and a measurable size. It can be photographed in its own recombination light, when the electrons and ions rejoin into whole atoms, looking like the haze in the nebulae.

Amazing things happen when two or more plasmoids are fired point blank at each other from about 10 cm apart. It would seem that when they meet their transverse electric fields would cancel each other so that both plasmoids stopped dead. Instead, they bounce off each other like billiard balls. It seems the little dynamos act as an outlet or short-circuit for each other, and a substantial current (several amperes) flows briefly. The current gives rise to a "cushion" effect of high magnetic-field pressure between the two plasmoids which pushes them away from each other.

Occasionally two plasmoids crashing into each other head on

head break into fragments, but even these fragments seem to behave as entities. In other words, we appear to be dealing with bodies which have strong powers of self organization and preservation. Almost as if these miniature galaxies were living things!

Even more striking results were had by firing plasmoids not into a vacuum but into a thin gas to simulate the rare distribution of particles in outer space. A little deuterium gas is introduced into the chamber amounting to a pressure of one micron. Now, when a plasmoid is fired into the chamber through a magnetic field, the gas becomes somewhat ionized by the firing, and allows current to flow. The current slows the movement of the plasmoid and also twists its path and shape. When four or eight plasmoids are fired at once from four different directions, upon meeting near the center they whirl and form a ring with spiral arms. The formation looks strikingly like a photograph of a spiral galaxy. If two plasmoids are fired at each other head on, they form an S-shaped figure resembling a "barred" spiral galaxy.

Many other unexpected shapes like wild pretzels are also formed. These fantastic shapes and their weird intertwining behavior can be explained on the complicated interactions between the plasmoids and the magnetic fields.

A barred spiral, it appears may be formed by plasmoids joining head to head; a ring spiral by plasmoids joining head to tail. When the ring is oval shaped, part of it flips over to form a figure eight.

Three dimensional photographs show that as a plasmoid moves across the magnetic field it is twisted, into the shape of a left-handed screw.

The recent breakdown of the parity principle (that all nature is symmetrical) may bear a relation to this fact. Recent particle experiments show there is a real tendency for the matter in our universe to go into left-handed spins.

Under certain conditions the plasmoids form a pair of rings, which do not stay in the center of the chamber but move away from each other in opposite directions. It is believed that these rings are basically similar to the magnetohydrodynamic whirls, which are formed in pairs in the interior of the sun and may be responsible for sunspots. But the plasma rings are not rings in a fluid, but are separate, independent bodies. They represent a form of ordered organization by nature that has not been known till now. It is a case of electrons and ions collaborating with a magnetic field to form bodies which, though inanimate, assume orderly, characteristic shapes and possess a firm integrity.

They are a kind of self-shaping gaseous clay or putty. Clues

to understanding the large scale universe—the stars and galaxies, and at the other end clues to the construction of fundamental particles such as the electron, the proton, mesons, and neutrinos—all these clues to understanding may be locked in the plasmoids. The smallest particles may also be made of a self-organizing putty: a putty composed of the electro-magnetic field and its own gravitational forces, which working together, create the bodies we know as particles.

In speaking of the larger universe, Dr. Bostick explains that the suggested evolutionary process for the heavenly galaxy is one in which the electrons and protons of the ionized hydrogen in outer space are attracted gravitationally toward a center across a magnetic field. On theoretical grounds, this situation is expected to be unstable. One would expect then, jets of plasma to form and be attracted toward the center of and across the magnetic field. When they are, it is anticipated that the centerward-traveling jets will behave like the plasmoids produced in the laboratory, that is, produce spiral arms which eventually wrap themselves up into a central structure.

In their race toward the slightly higher concentration of ions that form the center, the jets of ionized matter—or heavenly plasmoids—leave a trail of debris which, in time, forms

into huge concentrations of ionized matter. The luminous evidence of these accumulations, glowing in the heavens, are the myriad stars and planets that make up the galaxies. The manner in which condensed matter in stars is transformed into the elements, such as iron, copper, and carbon which form the substances of the earth and other planets and stars, has already been established by astronomers and physicists.

The barred spiral galaxies, as well as the many-armed spiral galaxies produced in the laboratory, constitute the majority of the galaxies seen in the sky. The barred spirals, consisting of two boomerang-shaped arms that join during a galaxy's evolution to form "S"-shapes, represent about twenty-five percent of all galaxies observed in the heaven.

It is believed that the gravitational energy generated in the process is transformed into magnetic energy. The accumulation of such energy may lead to the formation of an ever-growing general magnetic field around a galaxy. As the strength of this field increases, it may give rise to the forces that bring about the continuing expansion of the universe. It may be that these magnetic fields repel the magnetic fields surrounding other galaxies which are in the process of formation, thus accounting for the expanding universe.

The potential importance of this model in cosmology is that

the model can perhaps explain the continual appearance of matter in the universe by the gravitational synthesis of the neutron out of the electromagnetic field. The ionized hydrogen, (i.e. protons and electrons), which we assume to be the material out of which the galaxies are formed presumably comes from the decay of these neutrons.

It is theoretically possible to make larger plasma guns which could be used as a motor for space travel. Such a motor might also have the unique ability of providing a cushion against meteor or missile attacks through the creation of a powerful magnetic envelope that would make approaching objects veer away from it just as the plasmoids veer away from each other. Such a plasma motor could deliver a "specific impulse" (measure for rocket fuel) of 100,000 units as against the 250 units which is tops for chemical rocket fuels. In fact the USAF is seriously investigating this method of drive for use in outer space.

A fascinating prospect opens as a sequence to the following facts, when they are linked to the knowledge obtained from

the miniature galaxies. Only one part in a thousand of the universe is condensed into stars, the remainder is hydrogen gas, at least partially ionized. Such an ionized gas appears to have an uncanny sense for generating its own magnetic fields and if this magnetic field plays any important role, the shape of the universe is most likely to have a doughnut form. Laboratory experiments have shown that ionized gases in the presence of a magnetic field have an instinct for organization into doughnuts. If the universe is a doughnut shape, it would very likely have a companion (just as the laboratory universes have) so that the total angular momentum and resultant magnetic moment are zero. This formation would be right handed and we would expect its companion to be left handed. It is quite possible that we are the twin of another universe which is right handed since the dominant movement in our universe is left handed. It is very likely that there are at least several universes. The Earth centeredness that Galileo upset, is now going to be followed by the upset of the centeredness of our own universe. The possibilities are beyond even our wildest imaginings.

THE END

THE SPECTROSCOPE

by S. E. COTTS

FIRE IN THE HEAVENS. By George O. Smith. 224 pp. Avalon Books. \$2.75.

This is a rather irritating book. Very good and very bad features are jumbled together in its pages. Despite this, the novel is quite an enjoyable one.

Here is an example of what I mean. One of the most engrossing features of the book is one of the scientific backdrops of the story—the discovery that a solar nova is imminent. Yet this problem is presented in a way that is more reminiscent of a textbook than a novel. Under the guise of a soliloquy by one of the scientists in the story, the reader is subjected to whole chapters of scientific "ifs" and "ands."

Another instance—Mr. Smith manages a rather convincing picture of a young, scientific instrument maker, involved in his work, aloof from the social amenities, but with a certain shy sense of humor. Then as his foil we are given a shrewd, ruthless, beautiful young heiress. All right so far. But then the author has her become all sweetness and light in the end. He doesn't seem to realize, that having spent the bulk of the book making her detestable, he can't convince the reader of the opposite in half a dozen pages.

More examples like this could be given. For every good aspect of the book, there is a bad counterpart. But, the reader willing to put up with all this will find, buried deep down, a story that will hold his interest.

DEADLY IMAGE. By Edmund Cooper. 190 pp. Ballantine Books. Paper: 35¢.

Here is an interesting first novel, one that marks the author as a man to put down on your list. The book is a finely balanced one combining many diverse elements—a suspense story, a love story, a sociological study, a moral upheaval in a whole society.

Through a freak accident, John Markham, a twentieth century man survived past his time to see an age in which working had become a disgrace, and man had created androids to deal with the common problems of living. In addition, there were higher grade androids who were personal "companions" to each and every human being. Culture could reign supreme now that man had the money and the leisure to pursue it. To the people of the 22nd century this seemed like paradise on Earth. To Markham, their whole way of life was frightening for when there are perfect machines made to resemble human beings, what need is there for men at all? Then he

found other men who were secretly worried about the future of men who no longer have a real function.

This novel raises some timely questions in an intelligent, readable fashion. The solution presented in the end seems unrealistic and out of proportion, particularly in view of the superior presentation of the other parts. Nevertheless, the book is well worth reading, and is an auspicious debut of an original writer.

THE GRAVEYARD READER. Edited by Groff Conklin. 156 pp. Ballantine Books. Paper: 35¢.

The stories cover quite a time span—from the hundred-year-old Fitz-James O'Brien tale to one of Theodore Sturgeon that was done especially for this volume. All the various shades of horrors are here, too, from the plain ghost story (which seems almost mild considering the company it is in) to one which is certainly the King of all horror stories, Charles Beaumont's "Free Dirt."

The stories are well written in their own particular ways, but the collection as a whole is not completely successful. Their individual merits do not survive this lumping together; the horrors cancel each other out and one becomes insensible to them. The prevailing impression becomes that of a group of gifted writers wasting their time by seeing who can tell the "tallest tale."

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... OR SO YOU SAY

Dear Editor:

The May issue was the first *Amazing* I have read and was given to me by a friend, but I intend to become a steady reader. So there's another thirty-five cents a month.

My favorite story was "Brother Robot." I didn't care too much for "Sign of the Tiger" but read it anyway.

If you haven't already, why don't you print some of Murray Leinster's stories? They're great.

Ronald Shirley
618 W. Elm St.
Durant, Okla.

• *Murray Leinster is a hard boy to pin down, but we'll see what we can do.*

Dear Editor:

As a comparatively new enthusiast of s-f I am continually being surprised by the wealth of imaginative material that is published every month. From Greek mythology to latter day authors the predictions of things to come that have actually arrived are at every hand. It appears to me that authors with the imagination and foresight to anticipate the future today should achieve greater recognition than publication in a science fiction monthly and possible inclusion in an anthology.

There are annual awards in most fields of endeavor, from "Oscars" for the movie industry to Pulitzer and Nobel prizes. Why not an annual progress or s-f award to the author whose published predictions of things to come actually arrived during the year? The attendant publicity and recognition could immensely serve to elevate the standing and prestige of s-f. A Science Fiction Awards Academy, underwritten as a foundation by interested book and magazine publishers and other groups would be an ideal agency to carry forward such a program.

Leon D. Laffal
1970 McClelland Ave.
East Point, Ga.

• *Here's an idea for the fan clubs to take up. Maybe you've started something, Mr. Laffal.*

Dear Ed:

In the letter column of the July *Amazing*, Dan T. Rozman denounces automation for allegedly putting men out of work. The basic

question is, why do people work? Men do not labor for the pleasure of sweating or to merely kill time (that's called sport or recreation). The purpose of work is *production*. If production can be achieved with less work, where is the harm?

Fear of unemployment is actually fear of privation due to loss of income. But low income need not be harmful, if through automation goods are produced correspondingly cheaper. It has even been suggested (notably by Poul Anderson) that automation might reach such perfection that the necessities of a decent life could be provided free to all citizens, with additional luxury income being paid for the little work needed to maintain the production apparatus.

Because automation produces goods more cheaply, money is saved to be spent on other things. The industries producing these other things expand, creating new jobs for the men laid off from the automated factories. Or the increased productivity can be utilized in the form of a general reduction of working hours. So far, automation has not caused unemployment except very temporarily (our current recession is due to Government inflation of the money and credit supply, and is unrelated to automation).

To be sure, Mr. Rozman says, "I do not believe that goods produced by automation are cheap . . ." but he offers no proof. It seems plain that no businessman will introduce a new system of production unless it promises to be cheaper than the old. The comparative cheapness of automated production is the only reason for its adoption.

Very probably there will indeed be great hardships attending automation, but virtually all the suffering will be due to workers stubbornly resisting changes which are actually in their own best interests. They will be cutting their own throats.

George W. Price
2340 Lincoln Avenue
Chicago 14, Ill.

● *Resisting change is like trying to stop the seasons. In the long run, change is the only certainty we have. But still, you're being a little harsh in criticizing a worker's natural concern over his livelihood, and his antagonism for what may appear to be imperiling it at any given time.*

Dear Editor:

Most of the stories in *Amazing* are quite consistently good, but I was led to comment about the novel "The Waters Under the Earth." I read the title. I scanned the contents. I met the characters. I absorbed the plot. I said to myself, "Ye gads, another end of the world saga!" and to my disappointment I was right.

I can easily recall s-f's earlier days: H. G. Wells imaginative ex-

... OR SO YOU SAY

positions, and the not so imaginative tales of space gals, radiation baths and satellites. But, then, there were also the wonderful stories about time warps, geodesic lines, astral planes, frightening plants, superior beings and hundreds of other ingenious subjects. Now where has science fiction's old ingenuity gone? Must we suffer through quite similar tales on quite similar topics? Even I can offer some new subjects in this field. Could we, perhaps, pool our ideas, those of us who do not have the necessary writing ability, but do have imagination, and offer them to professional writers? I am desperate!

Out of at least the fifty s-f novels I like, I can find five or six really clever ideas. But only these few, the rest are variations on a theme: good variations, excellently handled and with well developed plots, but nevertheless variations. Something must be done.

Science fiction has lost its novelty and is now a field of literature. Even so, let's not let it lose its freshness and vigor or we'll have to go back to historical fiction.

Miss Bonnie Cross
440 E. South
Sturgis, Michigan

• *Perhaps this month's novel will be more to your liking, Miss Cross. It's good old space opera at its best.*

Dear Ed:

I enjoyed "The Waters Under the Earth" for the most part. I did not, however, like the finish, but as I am no writer I am quite sure that I could not do nearly half as well. One thing about the story that I do not understand: why didn't the Earth blow to pieces when the water hit the hot center of this Earth? I am thinking of what happens when lava hits the ocean.

Fred G. Michel
Veterans Hospital
Bldg. 62, Room 107
Sepulveda, Calif.

• *You've got to remember that the Earth is a pretty big, solid lump of rock. It's built to stand a lot of stress and strain. All the same, you've got a point, so let's keep the oceans where they belong, huh, Fred?*

Dear Editor:

I just finished the July issue of *Amazing* and a very good one it was. All of the stories were good, but especially "The Waters Under the Earth."

I've pretty much liked all of the book-length novels, but this one has a story to tell that's within the realm of possibility, in fact too much so for comfort. I don't know how much food for thought a story like this carries, I don't know, but I'd sure hate to be around if and when we have to revert to such barbarism.

Marijane Johnson
1011 E. Hoffman
Spokane 22, Wash.

- *I'm sure we won't revert to barbarism, Marijane—at least not before the next election.*

Dear Editor:

I like those titles. "The Waters Under the Earth," "The Sign of the Tiger." My, if I was running a contest—and I know that you are sick of the very thought now—it would be on some of the best titles that have ever appeared in *Amazing* or *Fantastic* since the first issue.

I figured that the monthly contest would not last so long. But I certainly do agree with you. The letters should really be coming in thick and heavy now—that was the whole idea of the contest, was it not?

James W. Ayers
609 First Street
Attalla, Ala.

- *Titles do mean a lot and we've had some great ones through the years. "So Shall Ye Reap . . ." "We The Machine." "The Man From Yesterday." It's hard to pick a single favorite.*

Dear Editor:

In the July issue of *Amazing* Mr. Rozman writes in a complaint about the mechanization of modern life and the effect it has on the job seekers.

Might I mention to him that in future time when work is practically non-existent in the true form of the word, man will, doubtless, be completely cared for. The future is a thing to be optimistic about. In intelligence the dominant type is the high I.Q., in physical matters the human race progresses, if only due to better care of the body during growth. We as a lot—as humanity—move forward, ever forward and will grow until we are adult, as a lot—as humanity.

Humanity is a new, strong thing, still in its infant stage. We might think of it as a baby cutting its teeth on atomic power to stand on its own two feet and to look around at the universe. We may not even be the last stage—but we will have our day. We will

grow from babyhood to childhood (by then we will have the universe to play in) to young manhood. We will grow and stretch and learn —then, when our fruitful years are over we will decline very slowly. We, in all probability, will outlast even the life of Sol and will carry what we have learned to other places. Mankind has a magnificent future—cheer it! Help it grow.

Though I understand Mr. Rozman's point of view I cannot accept it. It is only too easy to condemn that which is untried as harmful. It is much better to work to see if it is helpful.

Miss June Austin
1529 Ralston
Independence, Missouri

Dear Editor:

Fifteen years ago I read my first science fiction magazine. It introduced me to a new world of entertainment. A world of the bizarre and fantastic. A world of wonder and amazement. The title of this first magazine—*Amazing*.

Since then I've traveled to far off lands due to the courtesy of Uncle Sam and the USAF. I've been to England, Germany, and even far off Japan and Korea. I've seen many s-f magazines, both American and foreign but the one that still is on the top of my list is *Amazing*.

Certainly things have changed drastically in those hectic 15 years. Fifteen years ago we were in the middle of the biggest and most costly conflict that mankind has ever faced, WW II. Now we face the deadly onslaught of a possibly even more deadly foe, World Communism. Where this all will lead to I'm not quite certain but what I can be certain of is the fact that Communism will be defeated by the free world as all our former enemies of freedom have been vanquished.

There is one thing that has not changed and it's the cream of the crop stories that *Amazing* continues to offer in each and every issue. Certainly I do miss the pulp size and the multitude of columns that *Amazing* offered us in those days of yore but it was all for the common good as that was the growing up stage for *Amazing*. What has emerged is a mature *Amazing* with the best parts retained and the not too popular parts junked. This, Mr. Fairman, though in part an accumulative effort, is mostly due to your own personal effort to give us the best in science fiction. I salute you for this and wish you continued luck in your editorship of *Amazing*.

Robert N. Siders
USAF

AMAZING
STORIES

SCIENCE FICTION NOVEL

GOLD IN THE SKY

By ALAN E. NOURSE

ILLUSTRATOR LLEWELLYN

BOOK-LENGTH NOVEL COMPLETE IN THIS ISSUE

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YOU WILL MEET—

Greg Hunter. Test pilot—happy only when his life hung in the balance.

Tom Hunter. A pioneer—his frontier was hidden in test tubes.

Johnny Coombs. A prospector—he returned from the asteroids too soon.

Merrill Tawney. An industrialist—he sought plunder even beyond the stars.

Major Briarton. A government man—his creed was law and order.

1. Trouble Times Two

THE sun was glowing dull red as it slipped down behind the curving horizon of Mars, but Gregory Hunter was not able to see it.

There was no viewscreen in the ship's cabin; it was too tiny for that. Greg twisted around in the cockpit that had been built just big enough to hold him, and shifted his long legs against the brace-webbing, trying to get them comfortable.

He knew he was afraid... but nobody else knew that, not even the captain waiting at the control board on the satellite, and in spite of the fear Greg Hunter would not have traded places at this moment with anyone else in the universe.

He had worked too hard and waited too long for this moment.

He heard the count-down monitor clicking in his ears, and his hands clenched into fists. How far from Mars would he be ten minutes from now? He didn't know. Farther than any man had ever traveled before in the space of ten minutes, he knew, and faster. How far and how fast would depend on him alone.

"All set, Greg?" It was the captain's voice in the earphones.

"All set, Captain."

"You understand the program?"

Greg nodded. "Twenty-four hours out, twenty-four hours back, ninety degrees to the ecliptic, and all the acceleration I can stand both ways."

Greg grinned to himself. He thought of the months of conditioning he had gone through to prepare for this run... the hours in the centrifuge to build up his tolerance to acceleration, the careful diet, the rigorous hours of physical conditioning. It was only one experiment, one tiny step in the work that could someday give men the stars, but to Gregory Hunter at this moment it was everything.

"Good luck, then." The captain cut off, and the blast-off buzzer sounded.

He was off. His heart hammered in his throat, and his eyes ached fiercely, but he paid no attention. His finger crept to the air-speed indicator, then to the cut-off switch. When the pressure became too great, when he began to black out, he would press it.

But not yet. It was speed they wanted; they had to know how much acceleration a man could take for how long and still survive, and now it was up to him to show them.

Fleeting, he thought of Tom... poor old stick-in-the-mud Tom, working away in his grubby little Mars-bound laboratory, watching bacteria grow. Tom could never have qualified for a job like this. Tom couldn't even go into free-fall for ten minutes without getting sick all over the place. Greg felt a surge of pity for his brother, and then a twinge of malicious anticipation. Wait until Tom heard the reports on *this* run! It was all

right to spend your time poking around with bottles and test tubes if you couldn't do anything else, but it took something special to pilot an XP ship for Project Star-Jump. And after this run was over, even Tom would have to admit it. . . .

There was a lurch, and quite suddenly the enormous pressure was gone.

Something was wrong. He hadn't pushed the cut-off button, yet the ship's engines were suddenly silent. He jabbed at the power switch. Nothing happened. Then the side-jets sputtered, and he was slammed sideways into the cot.

He snapped on the radio speaker. "Control . . . can you hear me? Something's gone wrong out here . . ."

"Nothing's wrong," the captain's voice said in his earphones. "Just sit tight. I'm bringing you back in. There's a call here from Sun Lake City. They want you down there in a hurry. We'll have to scratch you on this run."

"Who wants me down there?"

"The U.N. Council office. Signed by Major Briarton himself and I can't argue with the Major. We're bringing you in."

Greg Hunter sank back, disappointment so thick he could taste it in his mouth. Sun Lake City! That meant two days at least, one down, one back, maybe more if connections weren't right. It meant that the captain would send Morton or one of the others out in his place. It meant . . .



They fought with



whatever was handy, not bothering to figure the odds.

Suddenly he thought of what else it meant, and a chill ran up his back.

There was only one reason Major Briarton would call him in like this. Something had happened to Dad.

Greg leaned back in the cot, suddenly tense, as a thousand frightful possibilities flooded his mind. It could only mean that Dad was in some kind of trouble.

And if anything had happened to Dad . . .

The sun was sinking rapidly toward the horizon when the city finally came into sight in the distance, but try as he would, Tom Hunter could not urge more than thirty-five miles an hour from the huge lurching vehicle he was driving.

On an open paved highway the big pillow-wheeled Sloppy Joe would do sixty in a breeze, but this desert route was far from a paved road. Inside the pressurized passenger cab, Tom gripped the shock-bars with one arm and the other leg, and jammed the accelerator to the floor. The engine coughed, but thirty-five was all it would do.

Through the windshield Tom could see the endless rolling dunes of the Martian desert stretching to the horizon on every side. They called Mars the Red Planet, but it was not red when you were close to it. There were multitudes of colors here . . . yellow, orange, brown, gray, occasional patches of gray-green . . . all shifting and changing in

the fading sunlight. Off to the right were the worn-down peaks of the Mesabi II, one of the long, low mountain ranges of almost pure iron ore that helped give the planet its dull red appearance from outer space. And behind him, near the horizon, the tiny sun glowed orange out of a blue-black sky.

Tom fought the wheel as the Sloppy Joe jounced across a dry creek bed, and swore softly to himself. Why hadn't he kept his head and waited for the mail ship that had been due at the Lab to give him a lift back? He'd have been in Sun Lake City an hour ago . . . but the urgency of the message had driven caution from his mind.

A summons from the Mars Coordinator of the U.N. Interplanetary Council was the same as an order . . . but there was more to Tom's haste than that. There was only one reason that Major Briarton would be calling him in to Sun Lake City, and that reason meant trouble.

Something was wrong. Something had happened to Dad.

Now Tom peered up at the dark sky, squinting into the sun. Somewhere out there between Mars and Jupiter was a no-man's-land of danger, a great circling ring of space dirt and debris, the Asteroid belt. And somewhere out there, Dad was working.

Tom thought for a moment of the pitiful little mining rig that Roger Hunter had taken out to the Belt . . . the tiny orbit-ship

to be used for headquarters and storage of the ore; the even tinier scout ship, Pete Racely's old *Scavenger* that he had sold to Roger Hunter for back taxes and repairs when he went broke in the Belt looking for his Big Strike. It wasn't much of a mining rig for anybody to use, and the dangers of a small mining operation in the Asteroid Belt were frightening. It took skill to bring a little scout-ship in for a landing on an asteroid rock hardly bigger than the ship itself; it took even more skill to rig the controlled-Murexide charges to blast the rock into tiny fragments, and then run out the shiny magnetic net to catch the explosion debris and bring it in to the hold of the orbit-ship....

Tom Hunter scowled, trying to shake off the feeling of uneasiness that was nibbling at his mind. Asteroid mining was dangerous... but Dad was no novice. Nobody on Mars knew how to handle a mining rig better than Roger Hunter did. He knew what he was doing out there, there was no real danger for him or was there...

Roger Hunter, a good man, a gentle and peaceful man, had finally seen all he could stomach of Jupiter Equilateral and its company mining policies six months before. He had told them so in plain, simple language when he turned in his resignation. They didn't try to stop him... a man was still free to quit a job on Mars if he wanted to, even a job with Jupiter Equilateral.

But it was an open secret that the big mining outfit had not liked Roger Hunter's way of resigning, taking half a dozen of their first-rate mining engineers with him. There had been veiled threats, rumors of attempts to close the markets to Roger Hunter's ore, in open violation of U.N. Council policies on Mars....

Tom fought the wheel as the big tractor lumbered up another rise, and the huge plastic bubble of Sun Lake City came into view far down the valley below.

He thought of Greg. Had Greg been summoned too? He closed his lips tightly as a wave of anger passed through his mind. If anything had happened, no matter what, he thought, Greg would be there. Taking over and running things, as usual. He thought of the last time he had seen his brother, and then deliberately blocked out the engulfing bitterness.

That had been more than a year ago. Maybe Greg had changed since then.

But somehow, Tom didn't think so.

The Sloppy Joe was on the valley floor now, and ahead the bubble covering the city was drawing closer. The sun was almost gone; lights were appearing inside the plastic shielding. Born and raised on Mars, Tom had seen the teeming cities of Earth only once in his life... but to him none of the splendors of the Earth cities could match the simple, quiet beauty of this Martian outpost settlement.

There had been a time when people had said that Sun Lake City could never be built, that it could never survive if it were, but with each successive year it grew larger and stronger, the headquarters city for the planet that had become the new frontier of Earth.

The radiophone buzzed, and the air-lock guard hailed him when he returned the signal. Tom gave his routine ID. He guided the tractor into the lock, waited until pressure and atmosphere rose to normal, and then leaped out of the cab.

Five minutes later he was walking across the lobby of the Interplanetary Council building, stepping into the down elevator. Three flights below he stepped out into the office corridor of the U.N. Interplanetary Council on Mars.

If there was trouble, this was where he would find it.

He paused for a minute before the gray plastic door marked MAJOR FRANK BRIARTON in raised stainless steel letters. Then he pushed open the door and walked into the ante-room.

It was empty. Suddenly he felt a touch on his shoulder. Behind him, a familiar voice said, "Hello, Twin."

At first glance they looked like carbon copies of each other, although they were no more identical than identical twins ever are. Greg stood a good two inches taller than Tom. His shoulders were broad, and there

was a small gray scar over one eye that stood out in contrast to the healthy tanned color of his face. Tom was of slighter build, and wirier, his skin much more pale.

But they had the same dark hair, the same gray eyes, the same square, stubborn line to the jaw. They looked at each other for a moment without speaking. Then Greg grinned and clapped his brother on the shoulder.

"So you got here, finally," he said. "I was beginning to think I'd have to go out on the desert and find you."

"Oh, I got here, all right," Tom said. "I see you did too."

"Yes," Greg said heavily. "Can't argue with the major, you know."

"But what does he want?"

"How should I know? All he said was to get down here fast. And now he isn't even here himself."

"Is Dad on Mars?" Tom asked.

Greg looked at him. "I don't know."

"We could check the register."

"I already checked it. He has not logged in, but that doesn't mean anything."

"I suppose not," Tom said glumly.

They were silent for a moment. Then Greg said, "Look, what are you worried about? Nothing could have happened to Dad. He's been mining the Belt for years."

"I know. I just wish he were here, that's all. If he's in some kind of trouble . . ."

"What kind of trouble? You're looking for spooks."

"Spooks like Jupiter Equilateral, maybe," Tom said. "They could make plenty of trouble for Dad."

"With the U.N. in the driver's seat here? They wouldn't dare. Why do you think the major rides them so hard with all the claim-filing regulations? He'd give his right arm for a chance to break that outfit into pieces."

"I still wish somebody had gone out to the Belt with Dad," Tom said.

Just then the door opened. The newcomer was a tall, gray-haired man with U.N. Council stripes on his lapel, and major's rockets on his shoulders. "Sorry I'm late, boys," Major Briarton said. "I'd hoped to be here when you arrived. I'm sorry to pull you in here like this, but I'm afraid I had no choice. When did you boys hear from your father last?"

They looked at each other. "I saw him six weeks ago," Tom said. "Just before he left to go out to the Belt again."

"Nothing since then?"

"Not a word."

The major chewed his lip. "Greg?"

"I had a note at Christmas, I think. But what . . ."

"What did he say in the note?"

"He said Merry Christmas and Happy New Year. Dad isn't much of a letter writer."

"Nothing at all about what he was doing?"

Greg shook his head. "Look,

Major, if there's some sort of trouble . . ."

"Yes, I'm afraid there's trouble," the major said. He looked up at them, and spread his hands helplessly. "There isn't any easy way to tell you, but you've got to know. There's been an accident, out in the Belt."

"Accident?" Greg said.

"A very serious accident. A fuel tank exploded in the scooter your father was riding back to the *Scavenger*. It must have been very sudden, and by the time help arrived . . ." The major broke off, unable to find words.

For a long moment there was utter silence in the room. Outside, an elevator was buzzing, and a typewriter clicked monotonously somewhere in the building.

Then Tom Hunter broke the silence. "Who was it, Major?" he said. "Who killed dad? Tell us, or we'll find out!"

2. Jupiter Equilateral

FOR a moment, Major Briarton just stared at him. Then he was on his feet, shaking his head as he came around the desk. "Tom, use your head," he said. "It's as much of a shock to me as it is to you, but you can't afford to jump to false conclusions . . ."

Tom Hunter looked up bitterly. "He's dead, isn't he?"

"Yes, he's dead. He must have died the instant of the explosion . . ."

"You mean you don't know?"

"I wasn't there at the time it happened, no."

"Then who was?"

Major Briarton spread his hands helplessly. "Nobody was. Your father was alone. From what we could tell later, he'd left the *Scavenger* to land on one of his claims, using the ship's scooter for the landing. He was on the way back to the *Scavenger* when the rear tank exploded. There wasn't enough left of it to tell what went wrong . . . but it was an accident, there was no evidence to suggest anything else."

Tom looked at him. "You really believe that?"

"I can only tell you what we found."

"Well, I don't believe it for a minute," Tom said angrily. "How long have you and Dad been friends? Twenty years? Twenty-five? Do you really think Dad would have an accident with a mining rig?"

"I know he was an expert engineer," the major said. "But things can happen that even an expert can't foresee, mining in the Belt."

"Things like a fuel tank exploding? Not to Dad, they would never happen. I don't care what anybody says . . ."

"Easy, Tom," Greg said.

"Well, I won't take it easy. Dad was too careful for something like that to happen. If he had an accident, somebody made it happen."

Greg turned to the major.

"What was Dad doing out there?"

"Mining."

"By himself? No crew at all?"

"No, he was alone."

"I thought the regulations said there always had to be at least two men working an asteroid claim."

"That's right. Your father had Johnny Coombs with him when he left Sun Lake City. They signed out as a team . . . and then Johnny came back to Mars on the first shuttle ship."

"How come?"

"Not even Johnny knows. Your father just sent him back, and there was nothing we could do about it then. The U.N. has no jurisdiction in the belt, unless a major crime has been committed." Major Briarton shook his head helplessly. "If a man is determined to mine a claim all by himself out there, he can find a dozen different ways to wiggle out of the regulations."

"But Dad would never be that stupid," Greg said. "If he was alone when it happened, who found him?"

"A routine U.N. Patrol ship. When Roger failed to check in at the regular eight-hour signal, they went out to see what was wrong. But by the time they reached him, it was too late to help."

"I just don't get it," Greg said. "Dad had more sense than to try to mine out there all by himself."

"I know," the major said. "I don't know the answer. I had the

Patrol ship go over the scene of the accident with a comb after they found what had happened, but there was nothing there to find. It was an accident, and that's that."

"What about Jupiter Equilateral?" Tom said hotly. "Everybody knows they were out to get Dad . . . why don't you find out what *they* were doing when it happened, bring them in for questioning . . ."

"I can't do that, I haven't a scrap of evidence," the major said wearily.

"Why can't you? You're the Mars Coordinator, aren't you? You act like you're scared of them."

Major Briarton's lips tightened angrily. "All right, since you put it that way . . . I *am* scared of them. They're big, and they're powerful. If they had their way, there wouldn't be any United Nations control on Mars, there wouldn't be *anybody* to fight them and keep them in check. There wouldn't be any independent miners out in the Belt, either, because they'd all be bought out or dead, and Earth would pay through the nose for every ounce of metal that they got from the Asteroid Belt. That company has been trying to drive the U.N. off Mars for thirty years, and they've come so close to it that it scares me plenty." He pushed his chair back sharply and rose to his feet. "And that is exactly why I refuse to stir up a mess over this thing, unhappy as it is, without

something more than suspicions and rumors to back me up . . . because all Jupiter Equilateral needs is one big issue to make us look like fools out here, and we're through."

He crossed the room to a wall cabinet, opened it, and pulled out a scarred aluminum box. "We found this in the cabin of the *Scavenger*. I thought you boys might want it."

They both recognized it instantly . . . the battered old spacer's pack that Roger Hunter had used for as long as they could remember. It seemed to them, suddenly, as if a part of him had appeared here in the room with them. Greg looked at the box and turned away. "You open it," he said to Tom in a sick voice.

There was nothing much inside . . . some clothing, a pipe and tobacco pouch, a jack knife, half a dozen other items so familiar that Tom could hardly bear to touch them. At the bottom of the pack was the heavy leather gun case which had always held Roger Hunter's ancient .44 revolver. Tom dropped it back without even opening the flap. He closed the box and took a deep breath. "Then you really believe that it was an accident and nothing more?" he said to the major.

Major Briarton shook his head. "What I think or don't think doesn't make any difference. It just doesn't matter. In order to do anything, I've got to have evidence, and there just

isn't any evidence. I can't even take a ship out there for a second look, with the evidence I have, and that's all there is to it."

"But you think that maybe it wasn't an accident, just the same," Tom pursued.

The major hesitated. Then he shook his head again. "I'm sorry, but I've got to stand on what I've said. And I think you'd better stand on it, too. There's nothing else to be done."

It should have been enough, but it wasn't. As Tom Hunter walked with his brother down the broad Upper Ramp to the business section of Sun Lake City, he could not shake off the feeling of helpless anger, the growing conviction that Roger Hunter's death involved something more than the tragic accident in space that Major Briarton had insisted it was.

"He didn't tell us everything he knew," Tom said fiercely. "He didn't say everything he wanted to say, either. He doesn't think it was an accident any more than I do."

"How do you know, are you a mind reader?"

"No."

"Well, Dad wasn't a superman, either. He was taking an awful risk, trying to work a mining rig by himself, and he had a bad break. Why do you have to have somebody to blame for it?"

"Keep talking," Tom said. "You'll convince yourself yet."

Greg just jammed his hands

in his pockets, and they walked in silence for a moment.

For Tom and Greg Hunter, Sun Lake City had always been home. Now they walked along the Main Concourse, Tom with the aluminum box under his arm, Greg with his own spacer's pack thrown over his shoulder. They didn't talk; rather than being drawn closer by the news of the tragedy, it seemed that they had drawn farther apart, as though the one common link that had held them together had suddenly been broken.

Finally Tom broke the silence. "At least there's one thing we can do," he said. "I'm going to call Johnny Coombs."

He shortly found a phone booth and dialed a number. Johnny had been a friend of the family for years; he and Roger Hunter had been partners in many mining ventures in the Asteroid Belt before Roger had taken his position with Jupiter Equilateral. If Johnny had any suspicions that Roger Hunter's accident had been more than an accident, he certainly would not hesitate to voice them . . .

After a dozen rings, Tom hung up, tried another number. There was no answer there, either. Frowning, Tom rang the city's central paging system. "Put in a personal call for Johnny Coombs," he said when the "record" signal flashed on. "Tell him to contact the Hunters when he comes in. We'll be at home . . ."

They resumed their silent

walk. When they reached H wing on the fourth level, they turned right down an apartment corridor, and stopped in front of a familiar doorway. Tom pressed his palm against the lock-plate, and the door swung open.

It was home to them, the only home they had ever known. Soft lights sprang up on the walls of the apartment as the door opened. Tom saw the old bookcases lining the walls, the drafting-board and light at the far end of the room, the simple chairs and dining table, the door which led into the bedroom and kitchen beyond. The room had the slightly disheveled look that it had had ever since Mom had died . . . a slipper on the floor here, a book face down on the couch there . . .

It looked as though Dad had just stepped out for an hour or so.

Tom was three steps into the room before he saw the visitor.

The man was sitting comfortably in Roger Hunter's easy chair, a short, fat man with round pink cheeks that sagged a little and a double chin that rested on his neck scarf. There were two other men in the room, both large and broad-shouldered; one of them nodded to the fat man, and moved to stand between the boys and the door.

The fat man was out of his seat before the boys could speak, smiling at them and holding out his hand. "I wanted to be sure to see you before you left the city," he was saying, "so we just came on in to wait. I hope you

don't mind our . . . butting in, so to speak." He chuckled, looking from one twin to the other. "You don't know me, I suppose. I'm Merrill Tawney. Representing Jupiter Equilateral, you know."

Tom took the card he was holding out, looked at the name and the tiny gold symbol in the corner, a letter "J" in the center of a triangle. He handed the card to Greg. "I've seen you before," he told the fat man. "What do you want with us?"

Tawney smiled again, spreading his hands. "We've heard about the tragedy, of course. A shocking thing . . . Roger was one of our group so recently. We wanted you to know that if there is anything at all we can do to help, we'd be only too glad . . ."

"Thanks," Greg said. "But we're doing just fine."

Tawney's smile tightened a little, but he hung onto it. "I always felt close to your father," he said. "All of us at Jupiter Equilateral did. We were all sorry to see him leave."

"I bet you were," Greg said, "he was the best mining engineer you ever had. But Dad could never stand liars, or crooked ways of doing business."

One of the men started for Greg, but the fat man stopped him with a wave of his hand. "We had our differences of opinion," he said. "We saw things one way, your father saw them another way. But he was a fine man, one of the finest . . ."

"Look, Mr. Tawney, you'd better say what you came to say

and get out of here," Greg said dangerously, "before we give your friends here something to do."

"I merely came to offer you some help," Tawney said. He was no longer smiling. "Since your father's death, you two have acquired certain responsibilities. I thought we might relieve you of some of them."

"What sort of responsibilities?"

"You have an unmanned orbit-ship which is now a derelict in the Asteroid Belt. You have a scout-ship out there also. You can't just leave them there as a navigation hazard to every ship traveling in the sector. There are also a few mining claims which aren't going to be of much value to you now."

"I see," Greg said. "Are you offering to buy Dad's mining rig?"

"Well, I doubt very much that we'd have any use for it, as such. But we could save you the trouble of going out there to haul it in."

"That's very thoughtful," Greg said. "How much are you offering?"

Tom looked up in alarm. "Wait a minute," he said. "That rig's not for sale . . ."

"How much?" Greg repeated.

"Forty thousand dollars," Merrill Tawney said. "Ship, rig and claims. We'll even pay the transfer tax."

Tom stared at the man, wondering if he had heard right. He knew what Roger Hunter had

paid for the rig; he had been with Dad when the papers were signed. Tawney's offer was three times as much as the rig was worth.

But Greg was shaking his head. "I don't think we could sell at that price."

The fat man's hands fluttered. "You understand that those ships are hardly suited to a major mining operation like ours," he said, "and the claims . . ." He dismissed them with a wave of his hand. "Still, we'd want you to be happy with the price. Say, forty-five thousand?"

Greg hesitated, shook his head again. "I guess we'd better think it over, Mr. Tawney."

"Fifty thousand is absolutely the top," Tawney said sharply. "I have the papers right here, drawn up for your signatures, but I'm afraid we can't hold the offer open."

"I don't know, we might want to do some mining ourselves," Greg said. "For all we know, Dad might have struck some rich ore on one of those claims."

Tawney laughed. "I hardly think so. Those claims were all Jupiter Equilateral rejects. Our own engineers found nothing but low grade ore on any of them."

"Still, it might be fun to look."

"It could be very expensive fun. Asteroid mining is a dangerous business, even for experts. For amateurs . . ." Tawney spread his hands. "Accidents occur . . ."

"Yes, we've heard about those

accidents," Greg said coldly. "I don't think we're quite ready to sell, Mr. Tawney. We may never be ready to sell to you, so don't stop breathing until we call you. Now if there's nothing else, why don't you take your friends and go somewhere else?"

The fat man scowled; he started to say something more, then saw the look on Greg's face, and shrugged. "I'd advise you to give it some careful thought," he said as he started for the door. "It might be very foolish for you to try to use that rig."

Smiling, Greg closed the door in his face. Then he turned and winked at Tom. "Great fellow, Mr. Tawney. He almost had me sold."

"So I noticed," Tom said. "For a while I thought you were serious."

"Well, we found out how high they'd go. That's a very generous outfit Mr. Tawney works for."

"Or else a very crooked one," Tom said. "Are you wondering the same thing I'm wondering?"

"Yes," Greg said slowly. "I think I am."

"Then that makes three of us," a heavy voice rumbled from the bedroom door.

Johnny Coombs was a tall man, so thin he was almost gangling, with a long nose and shaggy eyebrows jutting out over his eyes. With his rudely cropped hair and his huge hands, he looked like a caricature of a frontier Mars-farmer, but the blue eyes under the eyebrows were not dull.

"Johnny!" Tom cried. "We were trying to find you."

"I know," Johnny said. "So have a lot of other people, includin' your friends there."

"Well, did you hear what Tawney wanted?"

"I'm not so quick on my feet any more," Johnny Coombs said, "but I got nothin' wrong with my ears." He scratched his jaw and looked up sharply at Greg. "Not many people nowadays get a chance to bargain with Merrill Tawney."

Greg shrugged. "He named a price and I didn't like it."

"Three times what the rig is worth," Coombs said.

"That's what I didn't like," Greg said. "That outfit wouldn't give us a break like that just for old times' sake. Do you think they would?"

"Well, I don't know," Johnny said slowly. "Back before they built the city here, they used to have rats getting into the grub. Came right down off the ships. Got rid of most of them, finally, but it seems to me we've still got some around, even if they've got different shapes now." He jerked his thumb toward the bedroom door. "In case you're wondering, that's why I was standin' back there all this time . . . just to make sure you didn't sell out to Tawney no matter what price he offered."

Tom jumped up excitedly. "Then you know something about Dad's accident!"

"No, I can't say I do. I wasn't there."

"Do you really think it was an accident?"

"Can't prove it wasn't."

"But at least you've got some ideas," Tom said.

"Takes more than ideas to make a case," he said at length. "But there's one thing I do know. I've got no proof, not a shred of it, but I'm sure of one thing just as sure as I'm on Mars." He looked at the twins thoughtfully. "Your dad wasn't just prospecting, out in the Belt. He'd run onto something out there, something big."

The twins looked at him. "Run onto something?" Greg said. "You mean . . ."

"I mean I think your dad hit a Big Strike out there, rich metal, a real bonanza lode. Maybe the biggest strike that's ever been made," the miner said slowly. "And then somebody got to him before he could bring it in."

3. Too Many Warnings

FOR a moment, neither of the boys could say anything at all.

From the time they had learned to talk, they had heard stories and tales that the miners and prospectors told about the Big Strike, the pot of gold at the end of the rainbow, the wonderful, elusive goal of every man who had ever taken a ship into the Asteroid Belt.

For almost a hundred and fifty years . . . since the earliest days of space exploration . . . there had been miners prospecting in

the Asteroids. Out there, beyond the orbit of Mars and inside the orbit of Jupiter, were a hundred thousand . . . maybe a hundred million, for all anybody knew . . . chunks of rock, metal and debris, spinning in silent orbit around the sun. Some few of the Asteroids were big enough to be called planets . . . Ceres, five hundred miles in diameter; Juno, Vesta, Pallas, half a dozen more. A few hundred others, ranging in size from ten to a hundred miles in diameter, had been charted and followed in their orbits by the observatories, first from Earth's airless Moon, then from Mars. There were tens of thousands more that had never been charted. Together they made up the Asteroid Belt, spread out in space like a broad road around the sun, echoing the age-old call of the bonanza.

For there was wealth in the Asteroids . . . wealth beyond a man's wildest dreams . . . if only he could find it.

Earth, with its depleted iron ranges, its exhausted tin and copper mines, and its burgeoning population, was hungry for metal. Earth needed steel, tin, nickel, and zinc; more than anything, Earth needed ruthenium, the rare-earth catalyst that made the huge solar energy converters possible.

Mars was rich in the ores of these metals . . . but the ores were buried deep in the ground. The cost of mining them, and of lifting the heavy ore from Mars' gravitational field and carrying

it to Earth was prohibitive. Only the finest carbon steel, and the radioactive metals, smelted and purified on Mars and transported to Earth, could be made profitable.

But from the Asteroid Belt, it was a different story. There was no gravity to fight on the tiny asteroids. On these chunks of debris, the metals lay close to the surface, easy to mine. Ships orbiting in the Belt could fill their holds with their precious metal cargoes and transfer them in space to the interplanetary orbit-ships spinning back toward Earth. It was hard work, and dangerous work; most of the ore was low-grade, and brought little return. But always there was the lure of the Big Strike, the lode of almost-pure metal that could bring a fortune back to the man who found it.

A few such strikes had been made. Forty years before a single claim had brought its owner seventeen million dollars in two years. A dozen other men had stumbled onto fortunes in the Belt . . . but such metal-rich fragments were grains of sand in a mighty river. For every man who found one, a thousand others spent years looking and then perished in the fruitless search.

And now Johnny Coombs was telling them that their father had been one of that incredible few.

"You really think Dad hit a bonanza lode out there?"

"That's what I said."

"Did you see it with your own eyes?"

"No."

"You weren't even out there with him!"

"No."

"Then why are you so sure he found something?"

"Because he told me so," Johnny Coombs said quietly.

The boys looked at each other. "He actually *said* he'd found a rich lode?" Tom asked eagerly.

"Not exactly," Johnny said. "Matter of fact, he never actually told me *what* he'd found. He needed somebody to sign aboard the *Scavenger* with him in order to get a clearance to blast off, but he never did plan to take me out there with him. 'I can't take you now, Johnny,' he told me. 'I've found something out there, but I've got to work it alone for a while.' I asked him what he'd found, and he just gave me that funny little grin of his and said, 'Never mind what it is, it's big enough for both of us. You just keep your mouth shut, and you'll find out soon enough.' And then he wouldn't say another word until we were homing in on the shuttle ship to drop me off."

Johnny finished his coffee and pushed the cup aside. "I knew he wasn't joking. He was excited, and I think he was scared, too. Just before I left him, he said, 'There's one other thing, Johnny. Things might not work out quite the way I figure them, and if they don't . . . make sure the twins know what I've told

you.' I told him I would, and headed back. That was the last I heard from him until the Patrol ship found him floating in space with a torn-open suit and a ruined scooter floating a few miles away."

"Do you think that Jupiter Equilateral knew Dad had found something?" Tom asked.

"Who knows? I'm sure that he never told them, but it's awful hard to keep a secret like that, and they sound awful eager to buy that rig," Johnny Coombs said.

"Yes, and it doesn't make sense. I mean, if they were responsible for Dad's accident, why didn't they just check in for him on schedule and then quietly bring in their rig to jump the claim?"

"Maybe they couldn't find it," Johnny said. "If they'd killed your dad, they wouldn't have dared hang around very long right then. Even if they'd kept the signal going, a Patrol ship might have come into the region any time. And if a U.N. Patrol ship ever caught them working a dead man's claim without reporting the dead man, the suit would really start to leak." Johnny shook his head. "Remember, your Dad had a dozen claims out there. They might have had to scout the whole works to find the right one. Much easier to do it out in the open, with your signatures on a claim transfer. But one thing is sure . . . if they knew what Roger found out there, and where it was, Tawney

would never be offering you triple price for the rig."

"Then whatever Dad found is still out there," Tom said.

"I'd bet my last dime on it."

"There might even be something to show that the accident wasn't an accident," Tom went on. "Something even the Major would have to admit was evidence."

Johnny Coombs pursed his lips, looking up at Tom. "Might be," he conceded.

"Well, what are we waiting for? We turned Tawney's offer down . . . he might be sending a crew out to jump the claim right now."

"If he hasn't already," Johnny said.

"Then we've got to get out there."

Johnny turned to Greg. "You could pilot us out and handle the navigation, and as for Tom . . ."

"As for Tom, he could get sick all over the place and keep us busy just taking care of him," Greg said sourly. "You and me, yes. Not Tom. You don't know that boy in a spaceship."

Tom started to his feet, glaring at his brother. "That's got nothing to do with it . . ."

"It's true, isn't it? You'd be a big help out there."

Johnny looked at Tom. "You always get sick in free fall?"

"Look, let's be reasonable," Greg said. "You'd just be in the way. There are plenty of things you could do right here, and Johnny and I could handle the rig alone . . ."

Tom faced his brother angrily. "If you think I'm going to stay here and keep myself company, you're crazy," he said. "This is one show you're not going to run, so just quit trying. If you go out there, I go."

Greg shrugged. "Okay, Twin. It's your stomach, not mine."

"Then let me worry about it."

"I hope," Johnny said, "that that's the worst we have to worry about. Let's get started planning."

Time was the factor uppermost in their minds. They knew that even under the best of conditions, it could take weeks to outfit and prepare for a run out to the Belt. A ship had to be leased and fueled; there were supplies to lay in. There was the problem of clearance to take care of, claims to be verified and spotted, orbit coordinates to be computed and checked . . . a thousand details to be dealt with, anyone of which might delay embarkation from an hour to a day or more.

It was not surprising that Tom and Greg were dubious when Johnny told them they could be ready to clear ground in less than twenty-four hours. Even knowing that Merrill Tawney might already have a mining crew at work on Roger Hunter's claims, they could not believe that the red tape of preparation and clearance could be cut away so swiftly.

They underestimated Johnny Coombs.

Six hours after he left them, he was back with a signed lease giving them the use of a scoutship and fuel to take them out to the Belt and back again; the ship was in the Sun Lake City racks waiting for them whenever they were ready.

"What kind of a ship?" Greg wanted to know.

"A Class III Flying Dutchman with overhauled atomics and hydrazine side-jets," Johnny said, waving the transfer order. "Think you can fly it?"

Greg whistled. "Can I? I trained in a Dutchman . . . just about the fastest scouter there is. What condition?"

"Lousy . . . but it's fueled, with six weeks' supplies in the hold, and it doesn't cost us a cent. Courtesy of a friend. You'll have to check it over, but it'll do."

They inspected the ship, a weatherbeaten scouter that looked like a relic of the '90's. Inside there were signs of many refittings and overhauls, but the atomics were well shielded, and it carried a surprising chemical fuel auxiliary for the cabin size. Greg disappeared into the engine room, and Tom and Johnny left him testing valves and circuits while they headed down to the U.N. Registry office in the control tower.

On the way Johnny outlined the remaining outfitting steps. Tom would be responsible for getting the clearance permit through Registry; Johnny would check out all supplies, and then

contact the observatory for the orbit coordinates of Roger Hunter's claims.

"I thought the orbits were mapped on the claim papers," Tom said. "I mean, every time an asteroid is claimed, the orbit has to be charted . . ."

"That's right, but the orbit goes all the way around the sun. We know where the *Scavenger* was when the Patrol ship found her . . . but she's been travelling in orbit ever since. The observatory computer will pinpoint her for us and chart a collision course so we can cut out and meet her instead of trailing her for a week. Do you have the crew-papers Greg and I signed?"

"Right here."

They were stepping off the ramp below the ship when a man loomed up out of the shadows. It was a miner Tom had never seen before. Johnny nodded as he approached. "Any news, Jack?"

"Quiet as a church," the man said.

"We'll be held up another eight hours at least," Johnny said. "Don't go to sleep on us, Jack."

"Don't worry about us sleepin'," the man said grimly. "There's been nobody around but yourselves, so far . . . except the clearance inspector."

Johnny looked up sharply. "You check his papers?"

"And his prints. He was all right."

Johnny took Tom's arm, and they headed through the gate to-

ward the control tower. "I guess I'm just naturally suspicious," he grinned, "but I'd sure hate to have a broken cut-off switch, or a fuel valve go out of whack at just the wrong moment."

"You think Tawney would dare to try something here?" Tom said.

"Never hurts to check. We've got our hands full for a few hours getting set, so I just asked my friends to keep an eye on things. Always did say that a man who's going to gamble is smart to cover his bets."

At the control tower they parted, and Tom walked into the clearance office. Johnny's watchman had startled him, and for the first time he felt a chill of apprehension. If they were right . . . if this trip to the Belt were not a wild goose chase from the very start . . . then Roger Hunter's accident had been no accident at all.

Quite suddenly, Tom felt very thankful that Johnny Coombs had friends. . . .

"I don't like it," the Major said, facing Tom and Greg across the desk in the U.N. Registry office below the control tower. "You've gotten an idea in your heads, and you just won't listen to reason."

Somewhere above them, Tom could hear the low-pitched rumble of a scout-ship blasting from its launching rack. "All we want to do is go out and work Dad's claim," he said for the second time.

"I know perfectly well what you want to do, that's why I told the people here to alert me if you tried to clear a ship. You don't know what you're doing . . . and I'm not going to sign those clearance papers."

"Why not?" Greg said.

"Because you're going out there asking for trouble, that's why not."

"But you told us before that there wasn't any trouble. Dad had an accident, that was all. So how could we get in trouble?"

The Major's face was an angry red. He started to say something, then stopped, and scowled at them instead. They met his stare. Finally he threw up his hands. "All right, so I can't legally stop you," he said. "But at least I can beg you to use your heads. You're wasting time and money on a foolish idea. You're walking into dangers and risks that you can't handle, and I hate to see it happen."

"Mining in the Belt is a job for experienced men, not rank novices."

"Johnny Coombs is no novice."

"No, but he's lost his wits, taking you two out there."

"Well, are there any other dangers you have in mind?"

Once more the Major searched for words, and failed to find them. "No," he sighed, "and you wouldn't listen if I did."

"It seems everybody is warning us about how dangerous this trip is likely to be," Greg said quietly. "Last night it was Mer-

rill Tawney. He offered to buy us out, he was so eager for a deal that he offered us a fantastic price. Then Johnny tells us that Dad mined some rich ore when he was out there on his last trip, but never got a chance to bring it in because of his . . . accident. Up until now I haven't been so sure Dad *didn't* just have an accident, but now I'm beginning to wonder. Too many people have been warning us . . ."

"You're determined to go out there, then?"

"That's about right."

The Major picked up the clearance papers, glanced at them quickly, and signed them. "All right, you're cleared. I hate to do it, but I suppose I'd go with you if the law would let me. And I'll tell you one thing . . . if you can find a single particle of evidence that will link Jupiter Equilateral or anybody else to your father's death, I'll use all the power I have to break them." He handed the papers back to Tom. "But be careful, because if Jupiter Equilateral is involved in it, they're going to play dirty."

At the door he turned. "Good trip, and good luck."

Tom folded the papers and stuck them thoughtfully into his pocket.

They met Johnny Coombs in the Registry offices upstairs; Tom patted his pocket happily. "We're cleared in forty-five minutes," he said.

Johnny grinned. "Then we're all set." They headed up the

ramp, reached ground level, and started out toward the launching racks.

At the far end of the field a powerful Class I Ranger, one of the Jupiter Equilateral scout fleet, was settling down into its slot in a perfect landing maneuver. The triangle-and-J-insignia gleamed brightly on her dark hull. She was a rich, luxuriously-looking ship. Many miners on Mars could remember when Jupiter Equilateral had been nothing more than a tiny mining company working claims in the remote "equilateral" cluster of asteroids far out in Jupiter's orbit. Gradually the company had grown and flourished, accumulating wealth and power as it grew, leaving behind it a thousand half-confirmed stories of cheating, piracy, murder and theft. Other small mining outfits had fallen by the wayside until now over two-thirds of all asteroid mining claims were held by Jupiter Equilateral, and the small independent miners were forced more and more to take what was left.

They reached the gate to the Dutchman's launching slot and entered.

Inside the ship Tom and Johnny strapped down while Greg made his final checkdown on the engines, gyros and wiring. The cabin was a tiny vault, with none of the spacious "living room" of the orbit-ships. Tom leaned back in the acceleration cot, and listened to the countdown signals that came at one

minute intervals now. In the earphones he could hear the sporadic chatter between Greg and the control tower. No hint that this was anything but a routine blast-off . . .

But there was trouble ahead, Tom was certain of that. Everybody on Mars was aware that Roger Hunter's sons were heading out to the Belt to pick up where he had left off. Greg had secured a leave of absence from Project Star-Jump . . . unhappily granted, even though his part in their program had already been disrupted. Even they had heard the rumors that were adrift. . . .

And if there was trouble now, they were on their own. The Asteroid Belt was a wilderness, untracked and unexplored, and except for an almost insignificant fraction, completely unknown. If there was trouble out there, there would be no one to help.

Somewhere below the engines roared, and Tom felt the weight on his chest, sudden and breathtaking.

They were on their way.

4. "Between Mars and Jupiter . . ."

AFTER all the tension of preparing for it, the trip out seemed interminable.

They were all impatient to reach their destination. During blast-off and acceleration they had watched Mars dwindle to a tiny red dot; then time seemed to stop altogether, and there was nothing to do but wait.

For the first eight hours of free fall, after the engines had cut out, Tom was violently ill. He fought it desperately, gulping the pills Johnny offered and trying to keep them down. Gradually the waves of nausea subsided, but it was a full twenty-four hours before Tom felt like stirring from his cot to take up the shipboard routine.

And then there was nothing for him to do. Greg handled the navigation skilfully, while Johnny kept radio contact and busied himself in the storeroom, so Tom spent hours at the viewscreen. On the second day he spotted a tiny chunk of rock that was unquestionably an asteroid moving swiftly toward them. It passed at a tangent ten thousand miles ahead of them, and Greg started work at the computer, feeding in the data tapes that would ultimately guide the ship to its goal.

Pinpointing a given spot in the Asteroid Belt was a gargantuan task, virtually impossible without the aid of the ship's computer to compute orbits, speeds, and distances. Tom spent more and more time at the viewscreen, searching the blackness of space for more asteroid sightings. But except for an occasional tiny bit of debris hurtling by, he saw nothing but the changeless panorama of stars.

Johnny Coombs found him there on the third day, and laughed at his sour expression. "Gettin' impatient?"

"Just wondering when we'll reach the Belt, is all," Tom said.

Johnny chuckled. "Hope you're not holdin' your breath. We've already been in the Belt for the last forty-eight hours."

"Then where are all the asteroids?" Tom said.

"Oh, they're here. You just won't see many of them. People always think there ought to be dozens of them around, like sheep on a hillside, but it just doesn't work that way." Johnny peered at the screen. "Of course, to an astronomer the Belt is just loaded . . . hundreds of thousands of chunks, all sizes from five hundred miles in diameter on down. But actually, those chunks are all tens of thousands of miles apart, and the Belt looks just as empty as the space between Mars and Earth."

"Well, I don't see how we're ever going to find one particular rock," Tom said, watching the screen gloomily.

"It's not too hard. Every asteroid has its own orbit around the sun, and everyone that's been registered as a claim has the orbit charted. The one we want isn't where it was when your Dad's body was found . . . it's been travelling in its orbit ever since. But by figuring in the fourth dimension, we can locate it."

Tom blinked. "Fourth dimension?"

"Time," Johnny Coombs said. "If we just used the three linear dimensions . . . length, width and depth . . . we'd end up at the

place where the asteroid *was*, but that wouldn't help us much because it's been moving in orbit ever since the Patrol Ship last pinpointed it. So we figure in a fourth dimension . . . the time that's passed since it was last spotted . . . and we can chart a collision course with it, figure out just where *we'll* have to be to meet it."

It was the first time that the idea of time as a "dimension" had ever made sense to Tom. They talked some more, until Johnny started bringing in fifth and sixth dimensions, and problems of irrational space and hyperspace, and got even himself confused.

"Anyway," Tom said, "I'm glad we've got a computer aboard."

"And a navigator," Johnny added. "Don't sell your brother short."

"Fat chance of that. Greg would never stand for it."

Johnny frowned. "You lads don't like each other very much, do you?" he said.

Tom was silent for a moment. Then he looked away. "We get along, I guess."

"Maybe. But sometimes just gettin' along isn't enough. Especially when there's trouble. Give it a thought, when you've got a minute or two. . . ."

Later, the three of them went over the computer results together. Johnny and Greg fed the navigation data into the ship's drive mechanism, checking and rechecking speeds and inclina-

tion angles. Already the Dutchman's orbital speed was matching the speed of Roger Hunter's asteroid . . . but the orbit had to be tracked so that they would arrive at the exact point in space to make contact. Tom was assigned to the viewscreen, and the long wait began.

He spotted their destination point an hour before the computer had predicted contact . . . at first a tiny pinpoint of reflected light in the scope, gradually resolving into two pinpoints, then three in a tiny cluster. Greg cut in the rear and lateral jets momentarily, stabilizing their contact course; the dots grew larger.

Ten minutes later, Tom could see their goal clearly in the viewscreen . . . the place where Roger Hunter had died.

It was neither large nor small for an asteroid, an irregular chunk of rock and metal, perhaps five miles in diameter, lighted only by the dull reddish glow from the dime-sized sun. Like many such jagged chunks of debris that sprinkled the Belt, this asteroid did not spin on any axis, but constantly presented the same face to the sun.

Just off the bright side the orbit-ship floated, stable in its orbit next to the big rock, but so small in comparison that it looked like a tiny glittering toy balloon. And clamped on its rack on the orbit-ship's side, airlock to airlock, was the *Scavenger*, the little scout ship that Roger

Hunter had brought out from Mars on his last journey.

While Greg maneuvered the Dutchman into the empty landing rack below the *Scavenger* on the hull of the orbit-ship, Johnny scanned the blackness around them through the view-scope, a frown wrinkling his forehead.

"Do you see anybody?" Tom asked.

"Not a sign . . . but I'm really looking for other rocks. I can see three that aren't too far away, but none of them have claim marks. This one must have been the only one Roger was working."

They stared at the ragged surface of the planetoid. Raw veins of metallic ore cut through it with streaks of color, but most of the sun-side showed only the dull gray of iron and granite. There was nothing unusual about the surface that Tom could see. "Could there be anything on the dark side?"

"Could be," Johnny said. "We'll have to go over it foot by foot . . . but first, we should go through the orbit-ship and the *Scavenger*. If the Patrol ship missed anything, we want to know it."

The interior of the orbit-ship was dark. It spun slowly on its axis, giving them just enough weight so they would not float free whenever they moved. Their boots clanged on the metal decks as they climbed up the curving corridor toward the control cabin.

Then Johnny threw a light switch, and they stared around them in amazement.

The cabin was a shambles. Everything that was not bolted down had been ripped open and thrown aside.

Greg whistled through his teeth. "The Major said the Patrol crew had gone through the ship . . . but he didn't say they'd wrecked it."

"They didn't," Johnny said grimly. "No Patrol ship would ever do this. Somebody else has been here since." He turned to the control panel, flipped switches, checked gauges. "Hydroponics are all right. Atmosphere is still good; we can take off these helmets. Fuel looks all right, storage holds . . ." He shook his head. "They weren't looting, but they were looking for something, all right. Lets look around and see if they missed anything."

It took them an hour to survey the wreckage. Not a compartment had been missed. Even the mattresses on the acceleration cots had been torn open, the spring-stuffing tossed about helter-skelter. Tom went through the lock into the *Scavenger*; the scout ship too had been searched, rapidly but thoroughly.

But there was no sign of anything that Roger Hunter might have found.

Back in the control cabin Johnny was checking the ship's log. The old entries were on microfilm, stored on their spools near the reader. More recent

entries were still recorded on tape. From the jumbled order, there was no doubt that marauders had examined them. Johnny ran through them nevertheless, but there was nothing of interest. Routine navigational data; a record of the time of contact with the asteroid; a log of preliminary observations on the rock; nothing more. The last tape recorded the call-schedule Roger Hunter had set up with the Patrol, a routine precaution used by all miners, to bring help if for some reason they should fail to check in on schedule.

There was no hint in the log of any extraordinary discovery.

"Are any tapes missing?" Greg wanted to know.

"Doesn't look like it. There's one here for each day-period."

"I wonder," Tom said. "Dad always kept a personal log. You know, a sort of a diary, on microfilm." He peered into the film storage bin, checked through the spools. Then, from down beneath the last row of spools he pulled out a slightly smaller spool. "Here's something our friends missed, I bet."

It was not really a diary, just a sequence of notes, calculations and ideas that Roger Hunter had jotted down and microfilmed from time to time. The entries on the one spool went back for several years. Tom fed the spool into the reader, and they stared eagerly at the last few entries.

A series of calculations, covering several pages, but with no notes to indicate what, exactly,

Roger Hunter had been calculating. "Looks like he was plotting an orbit," Greg said. "But what orbit? And why? Nothing here to tell."

"It must have been important, though, or Dad wouldn't have filmed the pages," Tom said. "Anything else?"

Another sheet with more calculations. Then a short paragraph written in Roger Hunter's hurried scrawl. "No doubt now what it is," the words said. "Wish Johnny were here, show him a *real* bonanza, but he'll know soon enough if . . ."

They stared at the scribbled, uncompleted sentence. Then Johnny Coombs let out a whoop. "I told you he found something! And he found it *here*, not somewhere else."

"Hold it," Greg said, peering at the film reader. "There's something more on the last page, but I can't read it."

Tom blinked at the entry. "'Inter Jovem et Martem planetam interposui,'" he read. He scratched his head. "That's Latin, and it's famous, too. Kepler wrote it, back before the asteroids were discovered. 'Between Jupiter and Mars I will put a planet.'"

Greg and Johnny looked at each other. "I don't get it," Greg said.

"Dad told me about that once," Tom said. "Kepler couldn't understand the long jump between Mars and Jupiter, when Venus and Earth and Mars were so close together. He

figured there ought to be a planet out here . . . and he was right, in a way. There wasn't any one planet, unless you'd call Ceres a planet, but it wasn't just empty space between Mars and Jupiter either. The asteroids were here."

"But why would Dad be writing that down?" Greg asked. "And what has it got to do with what he found out here?" He snapped off the reader switch angrily. "I don't understand any of this, and I don't like it. If Dad found something out here, where is it? And who tore this ship apart after the Patrol ship left?"

"Probably the same ones that caused the 'accident' in the first place," Johnny said.

"But why did they come back?" Greg protested. "If they killed Dad, they must have known what he'd found before they killed him."

"You'd think so," Johnny conceded.

"Then why take the risk of coming back here again?"

"Maybe they *didn't* know," Tom said thoughtfully.

"What do you mean?"

"I mean maybe they killed him too soon. Maybe they thought they knew what he'd found and where it was . . . and then found out that they didn't, after all. Maybe Dad hid it . . ."

Johnny Coombs shook his head. "No way a man can hide an ore strike."

"But suppose Dad did, somehow, and whoever killed him

couldn't find it? It would be too late to make him tell them. They'd *have* to come back and look again, wouldn't they? And from the way they went about it, it looks as though they weren't having much luck."

"Then whatever Dad found would still be here, somewhere," Greg said.

"That's right."

"But where? There's nothing on this ship."

"Maybe not," Tom said, "but I'd like to take a look at that asteroid before we give up."

They paused in the big ore-loading lock to reclamp their pressure suit helmets, and looked down at the jagged chunk of rock a hundred yards below them. In the lock they had found scooters . . . the little one-man propulsion units so commonly used for short distance work in space . . . but decided not to use them. "They're clumsy," Johnny said, "and the bumper units in your suits will do just as well for this distance." He looked down at the rock. "I'll take the center section. You each take an edge and work in. Look for any signs of work on the surface . . . chisel marks, Murexide charges, anything."

"What about the dark side?" Greg asked.

"If we want to see anything there, we'll either have to rig up lights or turn the rock around," Johnny said. "Let's cover this side first and see what we come up with."

He turned and leaped from the airlock, moving gracefully down toward the surface, using the bumper unit to guide himself with short bursts of compressed CO₂ from the nozzle. Greg followed, pushing off harder and passing Johnny halfway down. Tom hesitated. It looked easy enough . . . but he remembered the violent nausea of his first few hours of free fall.

Finally he gritted his teeth and jumped off after Greg. Instantly he knew that he had jumped too hard. He shot away from the orbit-ship like a bullet; the jagged asteroid surface leaped up at him. Frantically he grabbed for the bumper nozzle and pulled the trigger, trying to break his fall.

He felt the nozzle jerk in his hand, and then, abruptly, he was spinning off at a wild tangent from the asteroid, head over heels. For a moment it seemed that asteroid, orbit-ship and stars were all wheeling crazily around him. Then he realized what had happened. He fired the bumper again, and went spinning twice as fast. The third time he timed the blast, aiming the nozzle carefully, and the spinning almost stopped.

He fought down nausea, trying to get his bearings. He was three hundred yards out from the asteroid, almost twice as far from the orbit-ship. He stared down at the rock as he moved slowly away from it. Before, from the orbit-ship, he had been able to see only the bright side

of the huge rock; now he could see the sharp line of darkness across one side.

But there was something else . . .

He fired the bumper again to steady himself, peering into the blackness beyond the light-line on the rock. He snapped on his helmet lamp, aimed the spotlight beam down to the dark rock surface. Greg and Johnny were landing now on the bright side, with Greg almost out of sight over the "horizon" . . . but Tom's attention was focussed on something he could see only now as he moved away from the asteroid surface.

His spotlight caught it . . . something bright and metallic, completely hidden on the dark side, lying in close to the surface but not quite on the surface. Then suddenly Tom knew what it was . . . the braking jets of a Class I Ranger, crouching beyond the reach of sunlight in the shadow of the asteroid. . . .

Swiftly he fired the bumper again, turning back toward the orbit-ship. His hand went to the speaker-switch, but he caught himself in time. Any warning shouted to Greg and Johnny would certainly be picked up by the ship. But he had to give warning somehow.

He tumbled into the airlock, searching for a flare in his web belt. It was a risk . . . the Ranger ship might pick up the flash . . . but he had to take it. He was unscrewing the fuse cap from the flare when he saw Greg

and Johnny leap up from the asteroid surface.

Then he saw what had alarmed them. Slowly, the Ranger was moving out from its hiding place behind the rock. Tom reached out to catch Greg as he came plummeting into the lock. There was a flash from the Ranger's side, and Johnny Coombs' voice boomed in his earphones: "Get inside! Get the lock closed, fast . . . hurry up, can't waste a second."

Johnny caught the lip of the lock, dragged himself inside frantically. They were spinning the airlock door closed when they heard the thundering explosion, felt the ship lurch under their feet, and all three of them went crashing to the deck.

5. The Black Raider

FOR a stunned moment they were helpless as they struggled to pick themselves up. The stable airlock deck was suddenly no longer stable . . . it was lurching back and forth like a rowboat on a heavy sea, and they grabbed the shock-bars along the bulkheads to steady themselves. "What happened?" Greg yelped. "I saw a ship . . ."

As if in answer there was another crash belowdecks, and the lurching became worse. "They're firing on us, that's what happened," Johnny Coombs growled.

"Well, they're shaking us loose at the seams," Greg said. "We've got to get this crate out of here." He reached for his hel-

met, began unsnapping his pressure suit.

"Leave it on," Johnny snapped.

"But we can't move fast enough in these things . . ."

"Leave it on all the same. If they split the hull open, you'll be dead in ten seconds without a suit."

Somewhere below they heard the steady *clang-clang-clang* of the emergency-station's bell . . . already one of the compartments somewhere had been breached, and was pouring its air out into the vacuum of space. "But what can we do?" Greg said. "They could tear us apart!"

"First, we see what they've already done," Johnny said, spinning the wheel on the inner lock. "If they plan to tear us apart, we're done for, but they may want to try to board us . . . We'll wait and see."

An orbit-ship under fire was completely vulnerable. One well-placed shell could rip it open like a balloon.

Tom and Greg followed Johnny to where the control cabin was located. In control they found alarm lights flashing in three places on the instrument panel. Another muffled crash roared through the ship, and a new row of lights sprang on along the panel.

"How are the engines?" Greg said, staring at the flickering lights.

"Can't tell. Looks like they're firing at the main jets, but they've ripped open three stor-

age holds, too. They're trying to disable us . . ."

"What about the *Scavenger*?"

Johnny checked a gauge. "The airlock compartment is all right, so the scout ships haven't been touched. They couldn't fire on them without splitting the whole ship down the middle." Johnny leaned forward, flipped on the viewscreen, and an image came into focus.

It was a Class I Ranger, and there was no doubt of its origin. Like the one they had seen berthing at the Sun Lake City racks, this ship had a glossy black hull, with the golden triangle-and-J insignia standing out in sharp relief in the dim sunlight.

"It's our friends, all right," Johnny said.

"But what are they trying to do?" Tom said.

Even as they watched, a pair of scooters broke from the side of the Ranger and slid down toward the sun side of the asteroid. "I don't know," Johnny said. "I think they intended to stay hidden, until Tom lost control of his bumper, and got far enough around there to spot them." He frowned as the first scooter touched down on the asteroid surface.

"Can't we fire on them?" Greg said angrily.

"Not the way this tub is lurching around. They've got our main gyros, and the auxilliaries aren't powerful enough to steady us. Another blast or two could send us spinning like a top, and

we'd have nothing to stabilize us . . ."

There was another flash from the Ranger's hull, and the ship jerked under their feet. "Well, we're a sitting duck here," Greg said. "Maybe those engines will still work." He slid into the control seat, flipped the drive switches to fire the side jets in opposite pairs. They fired, steadyng the lurching of the ship somewhat, but there was no response from the main engines. "No good. We couldn't begin to run from them. We're stuck here."

"They could outrun us anyway," Tom said, watching the viewscreen. "And they're moving in closer now."

"They're going to board us," Tom said.

Johnny nodded, his eyes suddenly bright. "I think you're right. And if they do, we may have a chance. But we've got to split up. . . . Greg, you take the control cabin here, try to keep them out if you can. Tom can cover the main corridor to the storage holds, and I'll take the engine room section. That will sew up the entrances to control, here, and give us a chance to stop them."

"They may have a dozen men," Tom said. "They could just shoot us down."

"I don't think so," Johnny said. "They want *us*, not the ship, or they wouldn't bother to board us. We may not be able to hold them off, but we can try."

"What about making a run

for it in the *Scavenger*?" Greg said.

Johnny chuckled grimly. "It'd be a mighty short run. That Ranger's got homing shells that could blow the *Scavenger* to splinters if we tried it. Our best bet is to put up such a brawl that they think twice about taking us."

They parted in the corridor outside control, Johnny heading down for the engine room corridors, while Tom ran up toward the main outer-shell corridor, a Markheim stunner in his hand. The entire outer shell of the ship was storage space, each compartment separately sealed and connected with the two main corridors that circled the ship. On each side these corridors came together to join the short entry corridors from the scoutship airlocks.

Tom knew that the only way the ship could be boarded was through those locks; a man stationed at the place where the main corridors joined could block any entry from the locks . . . as long as he could hold his position. Tom reached the junction of the corridors, and crouched close to the wall. By peering around the corner, he had a good view of the airlock corridor.

Tom gripped the Markheim tightly, and he dialed it down to a narrow beam. Nobody had ever been killed by a stunner . . . but a direct hit with a narrow beam could paralyze a man for three days.

There was movement at the

far end of the airlock corridor. A helmeted head peered around the turn in the corridor; then two men in pressure suits, moved into view, walking cautiously, weapons in hand. Tom shrank back against the wall, certain they had not seen him. He waited until they were almost to the junction with the main corridor; then he took aim and pressed the trigger stud on his Markheim. There was an ugly ripping sound as the gun jerked in his hand. The two men dropped as though they had been poleaxed.

A shout, a scrape of metal against metal, and a shot ripped back at him from the end of the corridor. Tom jerked back fast, but not quite fast enough. He felt a sledge-hammer blow on his shoulder, felt his arm jerk in a cramping spasm while the corridor echoed the low rumble of sub-sonics. He flexed his arm to work out the spasm . . . they were using a wide beam, hardly strong enough to stun a man. His heart pounded. They were being careful, very careful. . . .

Two more men rounded the bend in the corridor. Tom fired, but they hit the deck fast, and the beam missed. The first one jerked to his feet, charged up the corridor toward him, dodging and sliding. Tom followed him in his sights, fired three times as the Markheim heated up in his hand. The beam hit the man's leg, dumping him to the deck, and bounced off to catch the second one.

But now there was another sound, coming from the corridor behind him. Voices, shouts, clanging of boots. He pressed against the wall, listening. The sounds were from below. They must have gotten past Johnny . . . probably the men on the scooters. Tom looked around helplessly. If they came up behind him, he was trapped in a crossfire. But if he left his position, more men could come in through the airlock. Even now two more came around the bend, starting up the corridor for him. . . .

Quite suddenly, the lights went out.

The men stopped. Sound stopped. The corridor was pitch black. Tom fired wildly down the corridor, heard shouts and oaths from the men, but he could see nothing. Then, ahead, a flicker of light as a headlamp went on. The men from the airlock were close, moving in on him, and from behind he saw light bouncing off the corridor walls . . .

He jerked open the hatch to a storage hold, ducked inside, and slammed the hatch behind him. He pressed against the wall, panting.

He waited.

Suddenly an idea flickered in Tom's mind.

It was a chance . . . a long chance . . . but it was something. If they were going to be captured in spite of anything they could do, even a long chance would be worth trying . . .

He waited in the darkness,

tried to think it through. It was a wild idea, an utterly impossible idea, he had never heard of it being tried before . . . but *any* chance was better than none. He remembered what Johnny had said in the control cabin. The Ranger ship would have homing shells. An attempt to make a run with the *Seavenger* might be disastrous.

He thought about it, trying to reason it out. The Jupiter Equilateral men obviously wanted them alive. They did not dare to kill Roger Hunter's sons, because Roger Hunter might have told them where the bonanza was. And Jupiter Equilateral would not dare let anyone of them break away. If one of them got back to Mars, the whole U.N. Patrol would be out in the Belt . . .

The plan became clear in his mind, but he had to let Greg know. He fingered the control of his helmet radio. The boarding party would have a snooper, but if he was quick, they wouldn't have time to nail him. He buzzed an attention code. "Greg? Can you hear me?"

Silence. He buzzed again, and waited. What was wrong? Had they already broken through to the control cabin and taken Greg? He buzzed again. "Greg! Sound off if you can hear me."

More silence. Then a click. "Tom?"

"Here. Are you all right?"

"So far. You?"

"They got past me, but they didn't hit me. How's Johnny?"

"I don't know," Greg said. "I think he's been hurt. Tom, you'd better get off, they'll have snoopers . . ."

"All right, listen," Tom said. "How does it look to you?"

"Bad. We're outnumbered, they'll be through to here any minute."

"All right, I've got an idea. It's risky, but it might let us pull something out of this mess. I'll need some time, though."

"How much?"

"Ten, fifteen minutes."

There was an edge to Greg's voice. "What are you planning?"

"I can't tell you, they're listening in. But if it works . . ."

"Look, don't do anything stupid."

"I can't hear you," Tom said. "You try to hold them for fifteen minutes . . . and don't worry. Take care of yourself."

Tom snapped off the speaker and moved to the hatchway. The corridor was empty, and pitch black. He started down toward the airlock, then stopped short at the sound of voices and the flicker of headlamps up ahead.

He crouched back, but the lights were not moving. Guards at the lock, making certain that nobody tried to board their own ship. Tom grinned to himself. They weren't missing any bets, he thought.

Except one. There was one bet they wouldn't even think of.

He backtracked to the storage hold, crossed through it, and out into the far corridor. He followed the gentle curve of the

deck a quarter of the way around the ship. Twice along the way he stumbled in the darkness, but saw no sign of the raiders. At last he reached the far side, and the corridor leading to No. 2 airlock. Again he could see the lamps of the guards around the bend; they were stationed directly inside their own lock.

Inching forward, he peered into blackness. Each step made a muffled clang on the deck plates. He edged his boots along as quietly as possible, reaching along the wall with his hand until he felt the lip of a hatchway.

The lights and voices seemed nearer now. In the dim reflected light he saw the sign on the door of the hatchway:

No. 2 Airlock

BE SURE PRESSURE GAUGE IS AT ZERO BEFORE OPENING HATCH

He checked the gauge, silently spun the wheel. There was a ping as the seals broke. He pulled the hatch open just enough to squeeze into the lock, then closed it behind him. Then he switched on the pumps, waiting impatiently until the red "all clear" signal flashed on. Then he opened the outside lock.

Just beyond, he could see the sleek silvery lines of the *Scavenger*.

It was their only chance.

He took a deep breath, and jumped across the gap to the open lock of the *Scavenger*.

6. The Last Run of the Scavenger

TO GREG HUNTER the siege of the orbit-ship had been a nerve-wracking game of listening and waiting for something to happen.

In the darkness of the control cabin he stretched his fingers, cramped from gripping the heavy Markheim stunner, and checked the corridor outside again. There was no sound in the darkness there, no sign of movement. Somewhere far below he heard metal banging on metal; minutes before he thought he had heard the sharp ripping sound of a stunner blast overhead, but he wasn't sure. Wherever the fighting was going on, it was not here.

He shook his head as his uneasiness mounted. Why hadn't Johnny come back? He'd gone off to try and disable the Ranger ship leaving Greg to guard the control cabin. Why no sign of the marauders in the control cabin corridor? This should have been the first place they would head for, if they planned to take the ship, but there had been nothing but silence and darkness. Johnny had been gone near 15 minutes already. Greg became more uneasy.

He waited. Suddenly, bitterly, he realized the hopelessness of it. Even if Johnny did manage to damage the Ranger ship, what difference would it make? They had been fools to come out here, idiots to ignore Tawney's warning, the three of them. Tawney

had told them in so many words that there would be trouble, and they had come out anyway, just begging for it.

Well, now they had what they'd begged for. Greg slammed his fist into his palm angrily. What had they expected? That the big company would step humbly aside for them, with a fortune hanging in the balance? If they had even begun to think it through before they started . . .

But they hadn't, and now it was too late. They were under attack; Johnny was off on a fool's errand, gone too long for comfort, and Tom . . . Greg glanced at his watch. It had been ten minutes since Tom's call. What had he meant by it? A plan, he said. A long chance.

He couldn't shake off the cold feeling in his chest when he thought about Tom. What if something happened to him . . .

Greg remembered how he had grown to resent his brother. The time when they were very young and Tom had been struck by the sickness, a native Martian virus they called it. He remembered the endless nights of attention given to Tom alone. From then on somehow they weren't friends any more. But now all that seemed to disappear and Greg only wished that Tom would appear down the corridor . . .

A sound startled him. He tensed, gripping the stunner, peering into the darkness. Had he heard something? Or was it his own foot scraping on the

deck plate? He held his breath, listening, and the sound came again, louder.

Someone was moving stealthily up the corridor.

Greg waited, covered by the edge of the hatchway. It might be Johnny returning, or maybe even Tom . . . but there was no sign of recognition. Whoever it was was coming silently. . . .

Then a beam of light flared from a headlamp, and he saw the blue crackle of a stunner. He jerked back as the beam bounced off the metal walls. Then he was firing point blank down the corridor, his stunner on a tight beam, a deadly pencil of violent energy. He heard a muffled scream and a bulk loomed up in front of him, crashed to the deck at his feet.

He fired again. Another crash, a shout, and then the sound of footsteps retreating. He waited, his heart pounding, but there was nothing more.

The first attempt on the control cabin had failed.

Five minutes later the second attempt began. This time there was no warning sound. A sudden, ear-splitting crash, a groan of tortured metal, and the barricaded hatchway glowed dull red. Another crash followed. The edge of the hatch split open, pouring acrid Murexide fumes into the cabin. A third explosion breached the door six inches; Greg could see headlamps in the corridor beyond.

He fired through the crack,

pressing down the stud until the stunner scorched his hand. Then he heard boots clanging up the other corridor. He pressed back against the wall, waited until the sounds were near, then threw open the hatch. For an instant he made a perfect target, but the raiders did not fire. The stunner buzzed in his hand, and once again the footfalls retreated.

They were being careful!

Silence then, and blackness. Minutes passed . . . five, ten . . . Greg checked the time again. It was over twenty minutes since Tom had talked to him. What had happened? Whatever Tom had planned must have misfired, or something would have happened by now. For a moment he considered leaving his post and starting down the dark corridor to search . . . but where to search? There was nothing to do but wait and hope for a miracle.

Then suddenly the lights blazed on in the control cabin and the corridor outside. An attention signal buzzed in Greg's earphones. "All right, Hunter, it's all over," a voice grated. "You've got five minutes to get down to No. 3 lock. If you make us come get you, you'll get hurt."

"I'll chance it," Greg snapped back. "Come on up."

"We're through fooling," the voice said. "You'd better get down here. And bring your brother with you."

"Sure," Greg said. "Start holding your breath."

The contact broke for a moment, then clicked on again. This time it was another voice. "We've got Johnny Coombs down here," it said. "You want him to stay alive, you start moving. Without your stunner."

Greg chewed his lip. They could be bluffing . . . but they might not be. "I want to see Johnny," he said.

On the control panel a view-screen flickered to life. "Take a look, then," the voice said in his earphones.

They had Johnny, all right. A burly guard was holding his good arm behind his back. Greg could see the speaker wires jerked loose from his helmet.

"It's up to you," the voice said. "You've got three minutes. If you're not down here by then, this helmet comes off and your friend goes out the lock. It's quick that way, but it's not very pleasant."

Johnny was shaking his head violently; the guard wrenched at his arm, and the miner's face twisted in pain. "Two minutes," the voice said.

"Okay," Greg said. "I'm coming down."

"Drop the stunner right there."

He dropped the weapon onto the deck. Three steps out into the corridor, and two guards were there to meet him, stunners raised. They marched him up the ramp to the outer level corridor and around to No. 3 lock.

They were waiting there with

Johnny. A moment later the guards herded them through the lock and into the hold of the Ranger ship, stripped off their suits, and searched them.

A big man with a heavy face and coarse black hair came into the cabin. He looked at Johnny and Greg and grunted. "You must be Hunter," he said to Greg. "Where's the other one?"

"What other one?" Greg said.

"Your brother. Where is he?"

"How would I know?" Greg said.

The man's face darkened. "You'd be smart to watch your tongue," he said. "We know there were three of you, we want the other one."

The man turned to a guard. "What about it?"

"Don't know, Doc. Nobody's reported him."

"Then take a crew and search the ship. We were due back hours ago. He's in there somewhere."

"Sure, Doc." The guard disappeared through the lock. The man called Doc motioned Greg and Johnny through into the main cabin.

"What are you planning to do with us?" Greg demanded.

"You'll find out soon enough." Doc's mouth twisted angrily.

A guard burst into the cabin. "Doc, there's just nobody there! We've scoured the ship."

"You think he just floated away in his space suit?" Doc growled. "Find him. Tawney only needs one of them, but we can't take a chance on the other

one getting back . . ." He broke off, his eyes on the viewscreen. "Did you check those scout ships?"

"No, I thought . . ."

"Get down there and check them." Doc turned back to the viewscreen impatiently.

Greg caught Johnny's eye, saw the big miner's worried frown. "Where is he?" he whispered.

"I don't know. Thought you did . . ."

"All I know is that he had some kind of scheme in mind."

"Shut up," Doc said to them. "If you're smart, you'll be strapping down before we . . ." He broke off in mid sentence, listening.

Quite suddenly, the Ranger ship had begun to vibrate. Somewhere, far away, there was the muffled rumble of engines.

Doc whirled to the viewscreen. Greg and Johnny looked at the same instant, and Johnny groaned.

Below them, the *Scavenger*'s jets were flaring. First the pale starter flame, then a long stream of fire, growing longer as the engines developed thrust.

Doc slammed down a switch, roared into a speaker. "That scout ship . . . stop it! He's trying to make a break!"

Two guards appeared at the lock almost instantly, but it was too late. Already she was straining at her magnetic cable moorings; then the exhaust flared, and the little scout ship leaped away from the orbit-ship, moving out at a tangent to the

asteroid's orbit, picking up speed, moving faster and faster . . .

In toward the orbit of Mars.

The man called Doc had gone pale. Now he snapped on the speaker again. "Frank? Stand by on missile control. He's asking for it."

"Right," the voice came back. "I'm sighting in."

The *Scavenger* was moving fast now, dwindling in the viewscreen. One panel of the screen went telescopic to track her. "All right," Doc said. "Fire one and two."

From both sides of the Ranger, tiny rockets flared. Like twin bullets the homing shells moved out, side by side, in the track of the escaping *Scavenger*. With a strangled cry, Greg leaped forward, but Johnny caught his arm.

"Johnny, Tom's on . . . that thing . . ."

"I know. But he's got a chance."

Already the homing shells were out of sight; only the twin flares were visible. Greg stared helplessly at the tiny light-spot of the *Scavenger*. At first she had been moving straight, but now she was dodging and twisting, her side-jets flaring at irregular intervals. The twin pursuit shells mimicked each change in course, drawing closer to her every second.

And then there was a flash, so brilliant it nearly blinded them, and the *Scavenger* burst apart in space. The second shell struck

a fragment; there was another flash. Then there was nothing but a nebulous powdering of tiny metal fragments.

The last run of the *Scavenger* had ended.

Dazed, Greg turned away from the screen, and somewhere, as if in a dream, he heard Doc saying, "All right, boys, strap this pair down. We've got a lot of work to do before we can get out of here."

7. Prisoners

WHEREVER they were planning to take them, the captors took great pains to make sure that their two prisoners did not escape before they were underway. Greg and Johnny were strapped down securely into acceleration cots. Two burly guards were assigned to them, and the guards were taking their job seriously. One of the two was watching them at all times, and both men held their stunners on ready.

Meanwhile, under Doc's orders, the crew of the Jupiter Equilateral ship began a systematic looting of the orbit-ship they had disabled. Earlier they had merely searched the cabins and compartments. Now a steady stream of pressure-suited men crossed through the airlocks into the crippled vessel, marched back with packing cases full of tape records, microfilm spools, stored computer data . . . anything that might conceivably contain information. The control cabin was

literally torn apart. Every storage hold was ransacked.

A team of six men was dispatched to the asteroid surface, searching for any sign of mining or prospecting activity. They came back an hour later, long-faced and empty handed. Doc took their reports, his scowl growing deeper and deeper.

Finally the last of the searchers reported in. "Doc, we'd scraped it clean, and there's nothing there. Not one thing that we didn't check before."

"There's got to be something there," Doc said.

"You tell me where else to look, and I'll do it."

Doc shook his head ominously. "Tawney's not going to like it," he said. "There's no other place it could be . . ."

"Well, at least we have this pair," the other said, jerking a thumb at Greg and Johnny. "They'll know."

Doc looked at them darkly. "Yes, and they'll tell, too, or I don't know Tawney."

Greg watched it all happening, heard the noises, saw the packing-cases come through the cabin, and still he could not quite believe it. He caught Johnny's eye, then turned away, suddenly sick. Johnny shook his head. "Take it easy, boy."

"He didn't even have a chance," Greg said.

"I know that. He must have known it too."

"But why? What was he thinking of?"

"Maybe he thought he could

make it. Maybe he thought it was the only chance . . ."

There was no other answer that Greg could see, and the ache in his chest was deeper.

There was no way to bring Tom back now. However things had been between them, they could never be changed now. But he knew that as long as he was still breathing, somebody somehow was going to answer for that last desperate run of the *Scavenger*. . . .

It had been an excellent idea, Tom Hunter thought to himself, and it had worked perfectly, exactly as he had planned it . . . so far. But now, as he clung to his precarious perch, he wondered if it had not worked out a little too well. The first flush of excitement that he had felt when he saw the *Scavenger* blow apart in space had begun to die down now; on its heels came the unpleasant truth, the realization that only the easy part lay behind him so far. The hard part was yet to come, and if that were to fail . . .

He realized, suddenly, that he was afraid. He was well enough concealed at the moment, clinging tightly against the outside hull of the Ranger ship, hidden behind the open airlock door. But soon the airlock would be pulled closed, and then the real test would come.

Carefully, he ran through the plan again in his mind. He was certain now that his reasoning was right. There had been two

dozen men on the raider ship; there had been no question, even from the start, that they would succeed in boarding the orbitship and taking its occupants prisoners. The Jupiter Equilateral ship had not appeared there by coincidence. They had come looking for something that they had not found.

And the only source of information left was Roger Hunter's sons. The three of them together might have held the ship for hours, or even days . . . but with engines and radios smashed, there had been no hope of contacting Mars for help. Ultimately, they would have been taken.

As he had crouched in the dark storage hold in the orbitship, Tom had realized this. He had also realized that, once captured, they would never have been freed and allowed to return to Mars.

If the three of them were taken, they were finished. But what if only two were taken? He had pushed it aside as a foolish idea, at first. The boarding party would never rest until they had accounted for all three. They wouldn't dare go back to their headquarters leaving one live man behind to tell the story. . . .

Unless they thought the third man was dead. If they were sure of that . . . *certain* of it . . . they would not hesitate to take the remaining two away. And if, by chance, the third man wasn't as dead as they thought he was, and could find a way to follow

them home, there might still be a chance to free the other two.

It was then that he thought of the *Scavenger*, and knew that he had found a way.

In the cabin of the little scout ship he had worked swiftly, fearful that at any minute one of the marauders might come aboard to search it. Tom was no rocket pilot, but he did know that the count-down was automatic, and that every ship could run on an autopilot, as a drone, following a prescribed course until it ran out of fuel. Even the shell-evasion mechanism could be set on automatic. . . .

Quickly he set the autopilot, plotted a simple high school math course for the ship, a course the Ranger ship would be certain to see, and to fire upon. He set the count-down clock to give himself plenty of time for the next step.

Both the airlock to the *Scavenger* and to the orbit-ship worked on electric motors. The *Scavenger* was grappled to the orbit-ship's hull by magnetic cables. Tom dug into the ship's repair locker, found the wires and fuses that he needed, and swiftly started to work.

It was an ingenious device. The inner airlock door in the orbit-ship was triggered to a fuse. He had left it ajar; the moment it was closed, by anyone intending to board the *Scavenger*, the fuse would burn, a circuit would open, and the little ship's autopilot would go on active. The ship would blast away

from its moorings, head out toward Mars. . . .

And the fireworks would begin. All that he would have to worry about then would be getting himself aboard the Ranger ship without being detected.

Which was almost impossible. But he knew there was a way. There was one place no one would think to look for him, if he could manage to keep out of range of the viewscreen lenses . . . the outer hull of the ship. If he could clamp himself to the hull, somehow, and manage to cling there during blastoff, he could follow Greg and Johnny right home.

He checked the fuse on the airlock once again to make certain it would work. Then he waited, hidden behind the little scout ship's hull, until the orbit-ship swung around into shadow. He checked his suit dials . . . oxygen for twenty-two hours, heater pack fully charged, soda-ash only half saturated . . . it would do. Above him he could see the rear jets of the Ranger. He swung out onto the orbit-ship's hull, and began crawling up toward the enemy ship.

It was slow going. Every pressure suit had magnetic boots and hand-pads to enable crewmen to go outside and make repairs on the hull of a ship in transit. Tom clung, and moved, and clung again, trying to reach the protecting hull of the Ranger before the orbit-ship swung him around to the sun-side again . . .

He couldn't move fast enough. He saw the line of sunlight coming around the ship as it swung full into the sun. He froze, crouching motionless. If somebody on the Ranger spotted him now, it was all over. He was exposed like a lizard on a rock. He waited, hardly daring to breathe, as the ship spun ponderously around, carrying him into shadow again.

And nothing happened. He started crawling upward again, reached up to grab the mooring cable, and swung himself across to the hull of the Ranger. The airlock hung open; he scuttled behind it, clinging to the hull in its shadow just as Greg and Johnny were herded across by the Jupiter Equilateral guards.

Then he waited. There was no sound, no sign of life. After awhile the Ranger's inner lock opened, and a group of men hurried across to the orbit-ship. Probably a searching party, Tom thought. Soon the men came back, then returned to the orbit-ship. After another minute, he felt the vibration of the *Scavenger*'s motors, and he knew that his snare had been triggered.

He saw the little ship break free and streak out in its curving trajectory. He saw the homing shells burst from the Ranger's tubes. The *Scavenger* vanished from his range of vision, but moments later he saw the sudden flare of light reflected against the hull of the orbit-ship, and he knew his plan had worked, but the ordeal lay ahead.

And at the end of it, he might really be a dead man.

Hours later, the last group of looters left the orbit-ship, and the airlock to the Ranger clang-ed shut. Tom heard the sucking sound of the air-tight seals, then silence. The orbit-ship was empty, its insides gutted, its engines no longer operable. The Ranger hung like a long splinter of silver alongside her hull, poised and ready to move on.

He knew that the time had come. Very soon the blastoff and the acceleration would begin. He had a few moments to find a position of safety, no more.

Quickly, he began scrambling toward the rear of the Ranger's hull, hugging the metal sides, moving sideways like a crab. Ahead, he knew, the viewscreen lenses would be active; if one of them picked him up, it would be quite a jolt to the men inside the ship . . . but it would be the end of his free ride.

But the major peril was the blastoff. Once the engines cut off, the ship would be in free fall. Then he could cling easily to the hull, walk all over it if he chose to, with the aid of his boots and hand-pads. But unless he found a way to anchor himself firmly to the hull during blastoff, he could be flung off like a pebble.

He heard a whirring sound, and saw the magnetic mooring cables jerk. The ship was preparing for blastoff. Automatic motors were drawing the cables

and grappling plates into the hull. Moving quickly, Tom reached the rear cable. Here was his anchor, something to hold him tight to the hull! With one hand he loosened the web belt of his suit, looped it over a corner of the grappling plate as it pulled in to the hull.

The plate pulled tight against the belt. Each plate fit into a shallow excavation in the hull, fitting so tightly that the plates were all but invisible when they were in place. Tom felt himself pulled in tightly as the plate gripped the belt against the metal, and the whirring of the motor stopped.

For an instant it looked like the answer. The belt was wedged tight . . . he couldn't possibly pull loose without ripping the nylon webbing of the belt. But a moment later the motor started whirring again. The plate pushed out from the hull a few inches, then started back, again pulling in the belt . . .

A good idea that just wouldn't work. The automatic machinery on a spaceship was built to perfection; nothing could be permitted to half-work. Tom realized what was happening. Unless the plate fit perfectly in its place, the cable motor could not shut off, and presently an alarm signal would start flashing on the control panel.

He pulled the belt loose, reluctantly. He would have to count on his boots and his handpads alone.

He searched the rear hull,

looking for some break in the polished metal that might serve as a toehold. To the rear the fins flared out, supported by heavy struts. He made his way back, crouching close to the hull, and straddled one of the struts. He jammed his magnetic boots down against the hull, and wrapped his arms around the strut with all his strength.

Clinging there, he waited.

It wasn't a good position. The metal of the strut was polished and slick, but it was better than trying to cling to the open hull. He tensed now, not daring to relax for fear that the blastoff acceleration would slam him when he was unprepared.

Deep in the ship, the engines began to rumble. He felt it rather than heard it, a low-pitched vibration that grew stronger and stronger. The Ranger would not need a great thrust to move away from the orbit-ship . . . but if they were in a hurry, they might start out at nearly Mars-escape . . .

The jets flared, and something slammed him down against the fin strut. The Ranger moved out, its engines roaring, accelerating hard. Tom felt as though he had been hit by a ton of rock. The strut seemed to press in against his chest; he could not breathe. His hands were sliding, and he felt the pull on his boots. He tightened his grip desperately. This was it. He had to hang on, had to hang on. . . .

He saw his boot on the hull surface, sliding slowly, creeping

back and stretching his leg, suddenly it broke loose; he lurched to one side, and the other boot began sliding. There was a terrible ache in his arms, as though some malignant giant were tearing at him, trying to wrench him loose as he fought for his hold.

There was one black instant when he knew he could not hold on another second. He could see the blue flame of the jet streaming behind him, the cold blackness of space beyond that. It had been a fool's idea, he thought in despair, a million-to-one shot that he had taken, and lost...

And then the pressure stopped. His boots clanged down on the hull, and he almost lost his hand-grip. He stretched an arm, shook himself, took a great painful breath, and then clung to the strut, almost sobbing, hardly daring to move.

The ordeal was over. Somewhere, far ahead, an orbit-ship was waiting for the Ranger to return. He would have to be ready for the braking thrust and the side-maneuvering thrusts, but he would manage to hold on. Crouching against the fin, he would be invisible to viewers on the orbit-ship... and who would be looking for a man clinging to the outside of a scout-ship?

Tom sighed, and waited. Jupiter Equilateral would have its prisoners, all right. He wished now that he had not discarded the stunner, but those extra pounds might have made the difference between life and death

during the blastoff. And at least he was not completely unarmed. He still had Dad's revolver at his side.

He smiled to himself. The pirates would have their prisoners, indeed... but they would have one factor to deal with that they had not counted on.

For Greg it was a bitter, lonely trip.

After ten hours they saw the huge Jupiter Equilateral orbit-ship looming up in the view-screen like a minor planet. Skilfully Doc maneuvered the ship into the launching rack. The guards unstrapped the prisoners, and handed them pressure suits.

Moments later they were in a section in crews' quarters where they stripped off their suits. This orbit-ship was much larger than Roger Hunter's; the gravity was almost Mars-normal, and it was comforting just to stretch and relax their cramped muscles.

As long as they didn't think of what was ahead.

Finally Johnny grinned and slapped Greg's shoulder. "Cheer up," he said. "We'll be honored guests for a while, you can bet on that."

"For a while," Greg said bitterly.

Just then the hatchway opened. "Well, who do we have here?" a familiar voice said. "Returning a call, you might say. And maybe this time you'll be ready for a bit of bargaining."

They turned to see the heavy

face and angry eyes of Merrill Tawney.

8. The Scavengers of Space

THE casual observer might have been fooled. Tawney's guard was down only for an instant; then the expression of cold fury and determination on his face dropped away as though the shutter of a camera had clicked, and he was all smiles and affability. They were honored guests here, one would have thought, and this pudgy agent of the Jupiter Equilateral combine was their genial host, anxious for their welfare, eager to do anything he could for their comfort. . . .

They were amazed by the luxuriousness of the ship. For the next few hours they received the best treatment, sumptuous accommodations, excellent food.

They were finishing their second cup of coffee when Tawney asked. "Feeling better, gentlemen?"

"You do things in a big way," Johnny said. "This is real coffee, made from grounds. Must have cost a fortune to ship it out here."

Tawney spread his hands. "We keep it for special occasions. Like when we have special visitors."

"Even when the visits aren't voluntary," Greg added sourly.

"We have to be realistic," Tawney said. "Would you have come if we invited you? Of course not. You gentlemen chose

to come out to the Belt in spite of my warnings. You thus made things very awkward for us, upset certain of our plans." He looked at Greg. "We don't ordinarily allow people to upset our plans, but now we find that we're forced to include you in our plans, whether you happen to like the idea or not."

"You're doing a lot of talking," Greg said. "Why don't you come to the point?"

Tawney was no longer smiling. "We happen to know that your father struck a rich lode on one of his claims."

"That's interesting," Greg said. "Did Dad tell you that?"

"He didn't have to. A man can't keep a secret like that, not for very long. Ask your friend here, if you don't believe me. And we make it our business to know what's going on out here. We have to, in order to survive."

"Well, suppose you heard right. The law says that what a man finds on his own claim is his."

"Certainly," Tawney said. "Nobody would think of claim-jumping, these days. But when a man happens to die before he can bring in his bonanza, then it's a question of who gets there first, wouldn't you think?"

"Not when the man is murdered," Greg said hotly, "not by a long shot."

"But you can't prove that your father was murdered."

"If I could, I wouldn't be here."

"Then I think we'll stick to

the law," Tawney said, "and call it an accident."

"And what about my brother? Was that an accident?"

"Ah, yes, your brother." Tawney's eyes hardened. "Quite a different matter, that. Sometimes Doc tends to be over-zealous in carrying out his assigned duties. I can assure you that he has been . . . disciplined."

"That's not going to help Tom very much."

"Unfortunately not," Tawney said. "Your brother made a very foolish move, under the circumstances. But from a practical point of view, perhaps it's not entirely a tragedy."

"What do you mean by that?"

"From what I've heard," Tawney said, "you didn't have much use for your twin brother. And now you certainly won't have to share your father's legacy . . ."

It was too much. With a roar Greg swung at the little fat man. The blow caught Tawney full in the jaw, jerked his head back. Greg threw his shoulder into a hard left, slamming Tawney back against the wall. The guard charged across the room, dragging them apart as Tawney blubered and tried to cover his face. Greg dug his elbow into the guard's stomach, twisted away and started for Tawney again. Then Johnny caught his arm and spun him around. "Stop it," he snapped. "Use your head, boy . . ."

Greg stopped, glaring at Tawney and gasping for breath. The company man picked him-

self up, rubbing his hand across his mouth. For a moment he trembled with rage. Then he gripped the table with one hand, forcibly regaining his control. He even managed a sickly smile. "Just like your father," he said, "too hot-headed for your own good. But we'll let it pass. I brought you here to make you an offer, a very generous offer, and I'll still make it. I'm a businessman, when I want something I want I bargain for it. If I have to share a profit to get it, I share the profit. All right . . . you know where your father's strike is. We want it. We can't find it, so you've got us over a barrel. We're ready to bargain."

Greg started forward. "I wouldn't bargain with you for . . ."

"Shut up, Greg," Johnny said.

Greg stared at him. The big miner's voice had cracked like a whip; now he was drawing Merrill Tawney aside, speaking rapidly into his ear. Tawney listened, shot a venomous glance across at Greg, and finally nodded. "All right," he said, "but I can't wait forever . . ."

"You won't have to."

Tawney turned to the guard. "You have your orders," he said. "They're to have these quarters, and the freedom of the ship, except for the outer level. They're not to be harmed, and they're not to be out of your sight except when they're locked in here. Is that clear?"

The guard nodded. Tawney looked at Johnny, and started for

the door, still rubbing his jaw. "We'll talk again later," he said, and then he was gone.

When the guard had left, and the lock buzzed in the door, Johnny looked at Greg and shook his head sadly. "You just about fixed things, boy, you really did. You've got to use your head if you want to stay alive a while, that's all. Look, there isn't going to be any bargaining with Tawney, he just doesn't work that way. It's heads he wins, tails we lose. Once he has what he wants we won't last six minutes. All right, then there's just one thing that can keep us alive . . . stalling him. We've got to make him think you'll give in if he plays his cards right."

Greg was silent for a minute. "I hadn't thought of it that way."

"And we've got to use the time we have to find some way to break for it." Johnny stood up, staring around the luxurious lounge. "If you want my opinion, it's going to take some pretty fancy footwork to get out of here with our skins."

True to his word, Tawney had given them the freedom of the ship. Greg and Johnny discovered that their guard was also an excellent guide. All day he had been leading them through the ship, chatting and answering their questions about asteroid mining, until they almost forgot that they were really prisoners here. And the guard's obvious pride in the scope and skill of

his company's mining operations was strangely infectious.

Watching the Jupiter Equilateral ship in operation, Greg felt his heart sink. Here was a huge, powerful organization, with all the equipment and men and know-how they could ever need. How could one man, or two or three in a team, hope to compete with them? For the independent miner, the only hope was the Big Strike, the single lode that could make him rich. He might work all his life without finding it, and then stumble upon it by sheer chance. . . .

But if he couldn't keep it when he found it, then what? What if the great mining company became so strong that they could be their own law in the Belt? What if they grew strong enough and powerful enough to challenge the United Nations on Mars itself, and gain control of the entire mining industry? What chance would the independent miner have then?

It was a frightening picture. Suddenly something began to make sense to Greg; he realized something about his father that he had never known before.

Roger Hunter had been a miner, yes. But he had been something else too, something far more important than just a miner.

Roger Hunter had been a fighter, fighting to the end for something he believed in. . . .

Tawney interrupted Greg's thought.

"Quite an operation," he said.

Greg looked at him. "So I see." "And very efficient, too. Our men have everything they need to work with. We can mine at far less cost than anyone else."

"But you still can't stand the idea of independent miners working the Belt," Greg said.

Tawney's eyebrows went up. "But why not? There's lots of room out here. Our operation with Jupiter Equilateral is no different from an independent miner's operation. We aren't different kinds of people." Tawney smiled. "When you get right down to it, we're both exactly the same thing . . . scavengers in space, vultures picking over the dead remains to see what we can find. We come out to the asteroids, and we bring back what we want and leave the rest behind. And it doesn't matter whether we've got one ship working or four hundred . . . we're still just scavengers."

"With just one difference," Greg said, turning away from the viewscreen.

"Difference?"

Greg nodded. "Even vultures don't kill their own," he said.

Later, when they were alone in their quarters again, Greg and Johnny stared at each other gloomily.

"Didn't you see *anything* that might help us?" Greg said.

"Not much. For an orbit-ship, this place is a fortress. I got a good look at that scout ship coming in . . . it was armed to the teeth. Probably they all are. And

they're keeping a guard now at every airlock."

"So we're sewed up tight," Greg said.

"Looks that way. They've got us, boy, and I think Tawney's patience is wearing thin, too. We're either going to have to produce or else."

"But what can we do?"

"Start bluffing."

"It seems to me we're just about bluffed out."

"I mean talk business," Johnny said. "Tell Tawney what he wants to know."

"When we don't know any more than he does? How?"

Johnny Coombs scratched his jaw. "I've been thinking about that," he said slowly, "and I wonder if we don't know a whole lot more than we think we do."

"Like what?" Greg said.

"We've all been looking for the same thing . . . a Big Strike, a bonanza lode. Tawney's men have raked over every one of your Dad's claims, and they haven't turned up a thing." Johnny looked at Greg. "Makes you wonder a little, doesn't it? Your Dad was smart, but he was no magician. And how does a man go about hiding something like a vein of ore?"

"I don't know," Greg said. "It doesn't seem possible."

"It isn't possible," Johnny said flatly. "There's only one possible explanation, and we've been missing it all along. Whatever he found, *it wasn't an ore strike*. It was something else, something far different from

anything we've been thinking of."

Greg stared at him. "But if it wasn't an ore strike, what was it?"

"I don't know," Johnny said. "But I'm sure of one thing . . . it was something important enough that he was ready to die before he'd reveal it. And that means it was important enough that Tawney won't dare kill us until he finds out what it was."

9. The Invisible Man

CROUCHING back into the shadow, Tom Hunter waited as the heavy footsteps moved up the corridor, then back down, then up and down again. He peered around the corner for a moment, looking quickly up and down the curving corridor. The guard was twenty yards away, moving toward him in a slow measured pace. Tom jerked his head back, then peered out again as the footsteps receded.

The guard was a big man, with a heavy-duty stunner resting in the crook of his elbow. He paused, scratched himself, and resumed his pacing. Tom waited, hoping that something might distract the big man, but he moved stolidly back and forth, not too alert, but far too alert to risk breaking out into the main corridor.

Tom moved back into the darkened corridor where he was standing, trying to decide what to do. It was a side corridor, and a blind alley; it ended in a large

hatchway marked HYDROPONICS, and there were no branching corridors. If he were discovered here, there would be no place to hide.

But he knew that he could never hope to accomplish his purpose here . . .

A hatch clanged open, and there were more footsteps down the main corridor as a change of guards hurried by. There was a rumble of voices, and Tom listened to catch the words.

. . . don't care what you think, the boss says tighten it up . . .

"But they got them locked in . . ."

"So tell it to the boss. We're supposed to check every compartment in the section every hour. Now get moving . . ."

The footsteps moved up and down the corridor then, and Tom heard hatches clanging open. If they sent a light down this spur . . . he turned to the hatch, spun the big wheel on the door, and slipped inside just as the footsteps came closer.

The stench inside was almost overpowering. The big, darkened room was extremely warm, the air damp with vapor. The plastic-coated walls streamed with moisture. Against the walls Tom could see the great hydroponic vats that held the yeast and algae cultures that fed the crew of the ship. Water was splashing in one of the vats, and there was a gurgling sound as nutrient broth drained out, to be replaced with fresh.

He moved swiftly across the compartment, into a darkened area behind the rows of vats, and crouched down. He heard footsteps, and the ring of metal as the hatchway came open. One of the guards walked in, peered into the gloom, wrinkled his nose, and walked out again, closing the hatchway behind him.

It would do for a while . . . if he didn't suffocate . . . but if this ship was organized like smaller ones, it would be a blind alley. Modern hydroponic tanks did not require much servicing, once the cultures were growing; the broth was drained automatically and sluiced through a series of pipes to the rendering plant where the yeasts could be flavored and pressed into surrogate steaks and other items for spaceship cuisine. There would be no other entrances, no way to leave except the way he had come in.

And with the guards on duty, that was out of the question. He waited, listening, as the check-down continued in nearby compartments. Then silence fell again. The heavy yeast aroma had grown more and more oppressive; now suddenly a fan went on with a whir, and a cool draft of freshened reprocessed air poured down from the ventilator shaft above his head.

Getting into the orbit-ship had been easier than he had hoped. In the excitement as the new prisoners were brought aboard, security measures had been lax. No one had expected

a third visitor; in consequence, no one looked for one. Huge as it was, the Jupiter Equilateral ship had never been planned as a prison, and it had taken time to stake out the guards in a security system that was at all effective. In addition, every man who served as a guard had been taken from duty somewhere else on the ship.

So there had been no guard at the airlock in the first few moments after the prisoners were taken off the Ranger ship. Tom had waited until the ship was moored, clinging to the fin strut. He watched Greg and Johnny taken through the lock, and soon the last of the crew had crossed over after securing the ship. Presently the orbit-ship airlock had gone dark, and only then had he ventured from his place of concealment, creeping along the dark hull of the Ranger ship and leaping across to the airlock.

A momentary risk, then, as he opened the lock. In the control room, he knew, a signal light would blink on a panel as the lock was opened. Tom moved as quickly as he could, hoping that in the excitement of the new visitors, the signal would go unnoticed . . . or if spotted, that the spotter would assume it was only a crewman making a final trip across to the Ranger ship.

But once inside, he began to realize the magnitude of his problem. This was not a tiny independent orbit-ship with a few corridors and compartments. This was a huge ship, a vast

complex of corridors and compartments and holds. There was probably a crew of a thousand men on this ship . . . and there was no sign where Greg and Johnny might have been taken.

He moved forward, trying to keep to side corridors and darkened areas. In the airlock he had wrapped up his pressure suit and stored it on a rack; no one would notice it there, and it might be handy later. He had strapped his father's gun case to his side, some comfort, but a small one.

Now, crouching behind the yeast vat, he lifted out the gun, hefted it idly in his hand. It was a weapon, at least. He was not well acquainted with guns, and in the shadowy light it seemed to him that this one looked odd for a revolver; it even felt wrong, out of balance in his hand. He slipped it back in the case. After all, it had been fitted to Dad's hand, not his. And Johnny or Greg would know how to use it better than he would.

If he could find them. But to do that, he would have to search the ship. He would have to move about, he couldn't just wait in a storage hold. And with all the guards that were posted, he would certainly stumble into one of them sooner or later if he tried leaving this spot . . .

He shook his head, and started for the hatch. He would have to chance it. There was no way to tell how much time he had, but it was a sure bet that he didn't have very long.

In the spur corridor again, he waited until the guard's footsteps were muffled and distant. Then he darted out into the main corridor, moving swiftly and silently away from the guard. At the first hatchway he ducked inside, waited in the darkness, panting . . .

The guard had stopped walking. Then his footsteps resumed, but more quickly, coming down the corridor. He stopped, almost outside the hatchway door. "Funny," Tom heard him mutter. "I'd have sworn . . ."

Tom held his breath, waiting. This was a storage hold, but he didn't dare to move, even to take cover. The guard stood motionless for a moment, then grunted, and resumed his slow pacing.

When he had moved away Tom caught his breath in huge gasps, his heart beating in his throat. It was no use, he thought in despair. Once or twice he might get away with it, but sooner or later a guard would be alert enough to investigate an obscure noise, a flicker of movement in the corner of his eye . . .

There had to be another way. His eye probed the storage hold, hopelessly, and then stopped on a metal grill in the wall.

For a moment, he didn't recognize what it was. Then there was a *whoosh-whoosh-whoosh* as a fan went on, and he felt cool air against his cheek. He held out his hand to the grill, found the air coming from there.

A ventilation shaft. Every space craft had to have recondi-

tioning units for the air inside the ship; the men inside needed a constant supply of fresh oxygen, but even more, without pumps to move the air in each compartment they would soon suffocate from the accumulation of carbon dioxide in the air they breathed out, or bake from the heat their bodies radiated. On the other hand, the yeasts and algae required carbon dioxide and yielded copious amounts of oxygen as they grew.

In Roger Hunter's little orbit-ship the ventilation shafts were small, a loose network of foot-square ducts leading from the central pumps and air-reconditioning units to every compartment in the ship. But in a ship of this size . . .

The grill was over a yard wide, four feet tall. It started about shoulder height and ran up to the overhead. The ducts would network the ship, opening into every compartment, and no one would ever open them unless something went wrong.

And then he was laughing out loud, working the grill out of the slots that held it to the wall, trying to make his hands work in his excitement.

He knew he had found his answer.

The grill came loose, lifted down in a piece. He stopped short as footsteps approached in the corridor, paused, and went on. Then he peered into the black gaping hole behind the grill. It was big enough for a man to crawl in. He shinned up

into the hole, and pulled the grill back into its slot behind him.

Somewhere far away he heard a throbbing of giant pumps. There was a rush of cool fresh air past his cheek, cold when it contacted the sweat pouring down his forehead. He could not quite stand up, but there was plenty of room for him to crouch and move.

Ahead of him was a black tunnel, broken only by a patch of light coming through the grill that opened into the next compartment. He started into the blackness, his heart racing.

Somewhere in the ship Johnny Coombs and Greg Hunter were prisoners . . . but now, Tom knew, there was a way to escape.

It was a completely different world, a world within a world, a world of darkness and silence, of a thousand curving and intersecting tunnels, some large, some small. For hours it seemed to him that he had been wandering through a tomb, moving through the corridors of a dead ship, the lone surviving crewman. There was some contact with the other world, of course, the world of the spaceship outside . . . each compartment had its metal grill, and he passed many of them. But there were like doors that only he knew existed. He met no one in *these* corridors, there was no danger of sudden discovery and arrest in these dark alleys . . .

His boots had made too much noise as he started out, so he

had slipped them off, hanging them from his belt and moving on in his stocking feet. As he went from duct to duct, he had an almost ridiculous feeling of freedom and power. In every sense, he was an invisible man. Not one soul on this great ship knew he was here, or even suspected. He had the run of the ship, complete freedom to go wherever he chose. He could move from compartment to compartment as silently and invisibly as if he had no substance at all.

He knew the first job was to learn the pattern of the ducts, and orientation was a problem. He had heard stories of men getting lost in the deep underground mining tunnels on Mars, wandering in circles for days until their food gave out and starved. And there was that hazard here, for every duct looked like every other one.

But there was a difference here, because the ducts curved just as the main ship's corridors did. He could always identify the center of the ship by the force of false gravity pulling the other way. Furthermore, as the ducts drew closer to the pumps and reconditioning units, they opened into larger vents, and the noise of the pumps thundered in his ears. After an hour of exploration, Tom was certain that from any place in the ship he could at least find his way to the outer layer, and from there to one of the scout-ship airlocks.

Finding Greg and Johnny was quite a different matter.

He could not see enough through the compartment grills to identify just what the compartments were; he was forced to rely on what he could hear. The engine rooms were easily identified. In one area he heard the banging of pots and pans, the steaming of kettles . . . obviously the galley. He found the control area. He could hear the clatter of typing instruments, the *click-click-click* of the computers working out the orbits and trajectories for the scoutships as they moved out from the orbit-ship or came back in. In another compartment he heard a dispatcher chattering his own special code-language into a microphone in a low-pitched voice. He passed another grill, and then stopped short as a familiar voice drifted through.

Merrill Tawney's voice.

Tom hugged the grill, straining to catch the words. The company man sounded angry; the man he was talking to sounded even angrier. "I can't help what you want or don't want, Merrill, I can only report what we've found, and that's nothing at all. Every one of those claims has been searched twice over. Doc and his boys went over them, and we didn't find anything they missed. I think you're barking up the wrong tree."

"There's got to be something," Tawney said, his voice tight with anger. "Hunter couldn't have taken anything away from

there, he didn't have a chance to. You read the reports . . ."

"I know," the other said wearily, "I know what the reports said."

"Then what he found is still there. There's no other possibility," Tawney said.

"We went over that rock with a microscope. We blew it to shreds. Assay has gone through the fragments literally piece by piece. They found low grade iron, a trace of nickel, a little tin, and lots of granite. If we never found anything richer than that, we'd have been out of business ten years ago."

There was a long silence. Tom pressed closer to the grill. Then he heard Tawney slam his fist into his palm. "You know what Roger Hunter's doing, don't you?" he said. "He's making fools of us, that's what! The man's dead, and he's making us look like idiots. If we hadn't been so sure we had the lode spotted . . ." He broke off. "Well, that's done, we can't undo it. But this brat of his . . ."

"Any luck there?"

"Not a word. He's playing coy."

"Maybe he doesn't know anything. Doc made a bad mistake when he blasted the other one . . . suppose he was the only one that knew."

"All right, it was a mistake," Tawney snapped. "What was he supposed to do, let him get back to Mars? We've got a good front there, but it's not that good. If the United Nations gets a toe-

hold out here, the whole Belt will go into their pocket, you realize that. They're waiting for us to make one slip." He paused, and Tom heard him pacing the compartment. "But I think we've got our boy. This one knows. We've been spoiling him so far, that's all. Well, now we start digging. When I get through with him, he'll be begging us to let him tell. You just watch me, as soon as the okay comes through . . ."

Tom drew back from the grill, moving on in the darkness. So far he had not rushed his exploration . . . there was a chance to use the ducts for escape, he wanted to know them well. But now he knew the hour was getting late. So far Greg and Johnny had been stalling Tawney . . . but Tawney was getting impatient.

He moved quickly and he thought again of what Tawney had said. Tawney was right about one thing . . . there was no way that Dad could have hidden a Big Strike so nobody could find it. It had to be there . . .

And yet it wasn't. He and Greg hadn't found it. Tawney's men hadn't found it, either. Why not? There must be a reason.

But he could not put his finger on it.

Half an hour later he was seriously worried. Half the compartments in the area were deserted, the men leaving for the cafeteria. The thought reminded Tom how hungry he was, and thirsty. His small emergency

ration kit was empty. He toyed with the thought of sneaking into a food storage compartment, then thrust it out of his mind as too risky. He had to find Greg and Johnny before anything.

He passed a grill, and heard a murmur of voices; something in the deep bass rumble caught his ear, and he stopped, listened.

The voices stopped also.

He waited for them to begin, pressing against the grill. Johnny Coombs was not the only man with a deep bass voice, he might have been mistaken. He listened, but there was no sound. He heard the whir of a fan begin, still no sound, not even footsteps.

And then it happened, so fast he was taken completely off guard. The grill suddenly gave way, pitching him forward into the compartment. Something struck him behind the ear as he fell; there was a grunt, a sharp command, and he was pinned to the floor in the semi-darkness of the compartment.

Then he heard a gasp, and he opened his eyes. He was staring into his brother's startled face. Greg was pinning his shoulders to the carpeted deck, and behind him Johnny Coombs had a fist raised . . .

But they had stopped in mid-air, like a tableau of puppets. Greg gaped, his jaw falling open, and Tom heard himself saying, "What are you trying to do, kill a guy? Seems to me one time is enough."

He had found them.

10. The Trigger

IN THE first instance of astonishment they were speechless. Later, Tom said it was the first time in his life that he had ever seen Greg totally without words; his brother jumped back, as if he had seen a ghost, and his mouth worked, but no sounds came out.

"Don't worry, it's me all right," Tom said, "and I'm mighty hungry."

Greg and Johnny stared at the black hole behind the grill . . . and then Greg was pumelling him, pounding him on the back, so excited he couldn't get a sentence out, and Johnny was hovering over them, incredulous but forced to believe his eyes, like a father overwhelmed by the impossible behavior of a pair of unpredictable children. It was a jubilant reunion. They broke open the cabinets and refrigerator in the back of the lounge and pulled out surro-ham and rolls, while Johnny got some coffee going. Tom was so famished he could hardly wait to make sandwiches of the ham. He ate it as fast as he got it.

But finally he slowed up, got his mouth empty enough to talk. "All right, let's have the story," Greg said, still looking as though he couldn't believe his eyes. "The last we saw, you were blown into atoms out there in that *Scavenger* . . . you've got some nerve turning up now and scaring us half out of our skins . . ."

"You want me to go back in my hole?"

"Just sit still and talk!"

Tom told them, then, starting from the beginning.

Through it all Greg stared in admiration. "We've got a genius among us, that's all," he said finally. "And I always thought you were the timid one . . ."

"But what else could I do?" Tom said. "You know what they say about grabbing a tiger by the tail . . . once you get hold, you've got to hold on."

"Okay," Greg said, "but the next time I make a crack about your retiring nature, remind me to stick my foot in my mouth."

"I'll do it for him," Johnny Coombs rumbled.

Tom nodded toward the open grill. "The only thing I don't see is how you knew I was back there."

Johnny grinned. "We were busy taking down the grill when you came along. We'd found three microphones in this place, and figured they might have one behind the grill. And then we heard somebody breathing back there . . . we thought they'd posted a guard back there, just to snoop us."

"Well, I'm glad you didn't hit him any harder . . ."

Johnny started to say something, then stopped, cocked his head toward the door. There were footsteps in the corridor outside; they came closer, stopped by the door. "Quick," Johnny hissed, "back inside!"

There was no time to look for

other concealment. Tom leaped across the room, jumped up into the shaft again, and Greg slammed the grate up into place just as the hatchway door swung open.

Merrill Tawney walked into the room, with two burly guards behind him.

For the first few seconds, Greg was certain that they were lost. He stood with his back to the ventilator grill, frozen in his tracks as the fat little company man came in the room. He tried to keep his face blank, but he knew he wasn't succeeding. He saw the puzzled frown form on Tawney's face.

The company man motioned the guards into the room, peered suspiciously at Greg and Johnny. "Am I interrupting something, by any chance?"

"Nothing at all," Johnny blurted. "We were just talking."

"Talking." Tawney repeated the word as if it were some strange language he didn't quite understand. He looked at the guard. "Let's just check them."

While one guard patted down their clothes, the other withdrew a stunner, held it on ready. Tawney prowled the lounge. He glanced at the food on the table, then reached under the chair cushion and withdrew the disconnected microphone, looked at the loose wires, and tossed it aside.

"They're clean," the guard said.

Tawney's face was a study of

uneasiness, but he clearly could not pinpoint what the trouble was. Finally he shrugged, turned on the smile again, although his eyes remained watchful. "Well, maybe you won't mind if I join in the talking for a while," he said. "You've been comfortable? No complaints?"

"No complaints," Greg said.

"Then I presume we're ready to talk business." He looked at Greg.

"You said you were ready to bargain," Greg said, "but I haven't heard any terms yet."

"Terms? Very simple. You direct us to the lode, we give you half of everything we realize from it," Tawney said, smiling.

"You mean you'll write us a contract? With a U.N. witness to it?"

"Well, hardly . . . under the circumstances. I'm afraid you'll have to take our word."

Greg looked at the company man, and shook his head. "Not that I don't trust you," he said, "but I'm afraid I can't give you what you want," Greg said.

"Why not?"

"Because I don't know where Dad made his strike."

The company man's face darkened. "Somebody knows where it is. Your father would never have found something like that without telling his own sons . . ."

"Sorry," Greg said. "Of course, I can tell you where you can find out, if you want to go look."

"We've already searched his records . . ."

"*Some* of his records," Greg said. "Not all of them. There was a compartment behind the main control panel in Dad's orbit-ship. Dad used it to store deeds, claims, other important papers. There was a packet of notes in there before your men fired on the ship. But of course, maybe you searched more thoroughly, the second time."

Tawney stared at him for a moment, then at Johnny. Johnny Coombs shrugged his shoulders solemnly, and shook his head. Without a word, the little company man walked to the intercom speaker on the wall. He spoke sharply into it, waited, then had a brief, pungent conversation with someone. Then he turned back to Greg, his face heavy with suspicion. "You saw these papers?"

"Certainly I saw them. I didn't have time to read them through, but what else could they be?"

"Let me warn you," Tawney said coldly, "if I send a crew out there on a wild goose chase, the party will be over when they get back, do you understand? You've been given every consideration. If this is a fool's errand, you'll pay for it very dearly." He turned on his heel, snarled at one of the guards. "I want them watched every minute," he said. "One of you stay with them constantly. It won't take long to find out if this is a stall . . ."

He stalked out, and the hatchway clanged behind him. One guard went along; the big one with the stunner stayed behind,

eyeing his prisoners unpleasantly. The stunner was in his hand the safety off.

Johnny Coombs started across the room toward the kitchenette, passing close to the guard. Suddenly he turned, swung his fist heavily down on the guard's neck. The stunner crackled, but Greg had jumped aside. Another blow from Johnny's fist sent the gun flying. Another blow, and the guard's legs slid out from under him. He fell unconscious to the floor.

In an instant they were across the room, lifting down the grill, helping Tom out of his hiding place. "Okay, boy," Johnny said to Greg, "I guess you pulled the trigger with that story of yours."

"Not me," Greg said. "Tom did. He's the one that showed us the way out . . . the same way he came in."

The guard was out for a while, they made sure of that first. Then there was a hasty consultation. "The airlocks are guarded," Johnny said, "and if they tumble to the ventilator shafts, they can smoke us out in no time. How are we going to get a scout-ship without showing ourselves? For that matter, how are we going to get a scout-ship away from here without being blown up the way the *Scavenger* was blown up?"

"I think I know a way," Tom said. "We have to have something to keep a lot of the crew busy. If we could get to the

ship's generators and put them out of commission somehow, it might do it."

"Why?" Greg wanted to know.

"Because of the air supply," Tom said. "Without the generators, the fans won't run. They'll have to get a crew to fix them or they'll suffocate."

"But that would only take a few men," Johnny said. "As soon as the generators went out, they'd look for us, and if we were missing . . . well, they'd have the whole crew beating the bushes for us. It wouldn't be long before somebody thought of the ventilators."

"But we've got to do something, and do it fast," Tom said.

"I know." Johnny chewed his lip. "It's a good idea, but we need more than just the generators. We've got to disable the ship . . . throw so many things at them so fast from so many different directions that they don't know which way to turn. That means we'd need to split up, and we'd need weapons." He hefted the guard's Markheim. "One stunner between three of us isn't enough."

"Well, we have this." Tom unbuckled Roger Hunter's gun case from his belt. "Dad's revolver. It's not a stunner, but it might help." He tossed the case to Johnny. "I can give you both a rundown on how the shafts go. We could plan to meet at a certain spot in a certain length of time . . ."

He broke off, looking at Johnny. The big miner had

taken Roger Hunter's gun from the case, and hefted it in his hand, started to check it automatically as Tom talked. But now his hand froze as he stared at the weapon.

"What's wrong?" Tom asked.

"This gun is wrong," Johnny said. "All wrong. Where did you get this thing?"

"From Dad's spacer pack, the one the Patrol brought back. The Major gave it to us in Sun Lake City." Tom peered at the gun. "Is it broken or something? It's just Dad's revolver . . ."

"It is, eh?" Johnny turned the gun over in his hand. "Whoever told you about guns?"

"What's wrong with it?"

There was an odd expression on Johnny's face as he handed the weapon back to Tom. "Take a look at it," he said. "Tell me whether it's loaded or not."

Tom looked at it. Except for a few hours on the firing range, he had had no experience with guns; he couldn't have taken down a Markheim and reassembled it if his life depended on it. But he had seen his father take the old revolver out of the leather case many times before.

Now Tom could see that this was not the same gun.

The thing in his hand was large and awkward. The handgrips didn't fit; there was no trigger guard, and no trigger. Several inches along the gleaming metal barrel was a shiny stud, and below it a dial with notches on it.

"That's funny," Tom said.

"I've never seen this thing before."

Greg took it from him, balanced it in his hand. "Doesn't feel right," he said. "All out of balance."

"Look at the barrel," Johnny said quietly.

Greg looked. There was no hole in the end of the barrel. "This thing's crazy," he said.

"And then some," Johnny said. "You haven't had this out of the case since you took it from the pack?"

"Just once," said Tom. "And I put it right back. I hardly looked at it. Look, maybe it's just a new model Dad got."

"It's no new model. I'm not even sure it's a gun," Johnny said. "Doesn't *feel* like a gun."

"What happens when you push the stud here?" Greg asked.

Johnny licked his lips nervously. "Try it," he said.

Greg leveled the thing at the rear wall of the lounge and pressed the stud. There was a sharp buzzing sound, and a blinding flash of blue light against the wall. It looked for all the world like the flash of a live power line shorting out. They squinted at the flash, rubbed their eyes . . .

And stared at the wall. Or at what was left of the wall, because most of the wall was gone. The metal had bellied out in a six-foot hole into the storage hold beyond . . .

Johnny Coombs whistled. "This thing did *that*?" he whispered.

"It must have . . ."

"But there's no gun ever made that could do that." He walked over to the hole in the wall. "That's half-inch steel plate. There's no way to pack that kind of energy into a hand gun."

They stared at the innocent-looking weapon in Greg's hand. "Whatever it is, Dad must have put it in the gun-case."

"Yes, he must have," Johnny said.

"Well, don't you see what that means? *Dad must have found it somewhere*. Somewhere out here in the Belt . . . a gun that no man could have made . . ."

He took the weapon, ran his finger along the gleaming barrel. "I wonder," he said, "what else Dad might have found out there."

Somewhere below them they heard a hatch clang shut, and even deeper in the ship generator motors began throbbing in a steady even rhythm. In the silence of the lounge they could hear their own breathing, and outside a thousand tiny sounds of the ship's activity were audible.

But now they had attention only for the odd-shaped piece of metal in Greg's hand, and for the hole that gaped in the wall.

"You think that *this* was what Dad found?" Greg said. "The Big Strike he told Johnny about?"

"It must be part of it," Tom said.

"But what is it? And where

did it come from? It doesn't make sense," Greg protested.

"It doesn't make sense the way we've been looking at it," Tom said. "All we've found was some gobbledegook in Dad's private log to tell us what he found . . . but it couldn't have been a vein of ore, or Tawney's men would have unearthed it. It had to be something else. Something that was so big and important that Dad didn't even dare let Johnny in on it."

"Yes, that's been the craziest part of it; to me," Johnny said. "I've done a lot of mining with your Dad. If he'd hit rich ore, he would have taken me out there to mine it with him. But he didn't. He said it was something he had to work on alone for awhile, and he sent me back."

"As if he'd found something that scared him," Tom said, "or something that he didn't understand. He was *afraid* to tell anybody. And whatever he found, he managed to hide it somewhere, so that nobody would find it . . ."

"Then why didn't he hide this part of it, too?" Greg said.

"Maybe to be sure there was some trace left, if anything happened to him," Tom said.

They were silent for a moment. The only sound was the stertorous breathing of the unconscious guard. "Well," Greg said finally, "I have to admit it makes sense. It makes other things add up better, too. Dad was no fool, he must have known that Tawney was onto some-

thing. And Dad would never have risked his life for an ore strike. He'd either have made a deal with Tawney or let him hijack the lode, if that was all there was to it. But there's still one big question . . . where did he hide what he found? And we aren't going to find the answer here." He walked over to the hole in the wall."

"Made quite a mess of it, didn't it?" Johnny said.

"Looks like it. I wonder what that thing would do to a ship's generator plant." He turned to Johnny. "We haven't much time. With this thing, we could tear this ship apart, leave them so confused they'll never know what broke loose. And if we could get that gun back to Major Briarton, he'd have to listen to us, and get the U.N. Patrol into the search . . ."

They had been so intent on their talking that they did not hear the footsteps in the corridor until the door swung open. It was another guard, the one who had departed with Tawney. He stopped short, blinking at his companion on the floor, and then at the gaping hole in the wall. When he saw the twins, side by side, his jaw sagged and a strangled sound came from his throat.

Then Johnny grabbed his arm, jerked him into the lounge, and slammed the hatch shut. Greg pulled the stunner from his holster and tossed it to Tom. The guard let out a roar, twisted free, and met Johnny's

fist as he came around. He sagged at the knees and slid to the floor beside the other guard. "All right," Johnny said, "we've dealt the cards, now we'd better play the hand. Tom, you first."

Tom pulled the ventilator grill down, and climbed up into the shaft. Greg followed, with Johnny at his heels, pulling the grill back up into place from the inside. They waited for a moment, but there was no sound from the lounge.

"All right," Johnny said breathlessly. "Let's move."

Swiftly they started down the dark tunnel.

11. The Haunted Ship

THEY did not pause, even to catch their breath, for the first twenty minutes as Tom led them swiftly and silently down through the maze of corridors and chutes that made up the ventilation system of the huge ship. Greg lost his bearing completely in the first twenty seconds; each time his brother paused at a junction of tubes, he felt a wave of panic rise up in his throat . . . suppose they lost themselves in here! He heard Johnny's trousers flapping behind him, saw Tom's figure flit past another grill up ahead, and plunged doggedly on.

It was amazingly hard to move quietly. Even in stocking feet they made a soft thud with each footfall.

But there was no sign of detection, no sound of alarm. Fi-

nally they came out into a large shaft which allowed them to stand upright, and they stopped to catch their breath.

"Main tube to the living quarters," Tom said when they had caught up to him. "Joins with the lower-level tube by a series of chutes. We've actually been circumnavigating the ship . . . I wanted to get as far away from that lounge compartment as possible, in case they check up on you right away."

"We can't have much time," Johnny said. "That second guard must have been coming to relieve the other, and when the first one doesn't report back, they'll smell something fishy."

They talked it over for a moment. Johnny had been careful to leave the hatchway into the corridor ajar before he climbed into the ventilator shaft, and then he had pulled the shaft snugly into place behind him. Anyone who came would find two unconscious guards, a burnt-out hole in the wall, and the door unlocked.

"We'll hope that he takes things at face value, and assumes we're at large in the ship somewhere, for awhile at least," Johnny said. "That hole in the wall is going to set them back a couple of steps, too."

"But they'll sound the alarm, at least," Tom said.

"You bet they will! They'll have every man on the crew shaking down the ship for us. But they may not think of the

ventilators until they can't find us anywhere else."

"But sooner or later they're bound to think of it."

"That's true," Johnny said. "Unless they keep seeing us in the ship. The way I figure it, this crew has been on battle stations plenty of times. They'll be able to search the whole ship in half an hour. We're just going to have to show ourselves . . . at least enough to keep them searching."

"Well, what if they do think of the ventilators?" Greg said. "They'd still have a time finding us."

"Maybe, but don't underestimate Tawney. He might just mask up his crew and flood the tubes with cyanide."

They thought about that for a minute. There was no sound here but their own breathing, and the low chug-chug-chug of the pumps somewhere deep in the ship. Momentarily they expected to hear the raucous clang of the alarm bell, as some crew member or another walked into the lounge and found them gone. But so far there was no sign they had been discovered missing. "No," Johnny said finally, "if we just hide out in here, and hope for a chance at one of the scout ships, they'll find us eventually. But we've got three big advantages, if we can figure out how to use them. That fancy gun, for one. A way to get around the ship, for another . . . and the fact that there's one more of us than they count on."

He flipped on his pocket flash, began drawing lines on the dusty floor of the shaft. "My idea is to keep them so busy fighting little fires that they won't have a chance to worry about where the big one is."

He drew a rough outline-sketch of the organization of the ship. "This look right to you, from what you've seen?" he asked Tom.

"Pretty much," Tom said. "There are more connecting tubes."

"All the better. We want to get the generators with our little toy here first. That'll darken the ship, and put the blowers out of commission in case they think of using gas. Also, it will cut out their computers and missile-launching rigs, which might give us a chance to get a scoutship away in one piece if we could get aboard one."

"All right, the generators are first," Tom said. "But then what? There are four hundred men on this ship. They'll have every airlock triple guarded. They'll block us for sure."

"Not when we get through, they won't," Johnny grinned. "We've got an old friend aboard who's going to help us."

"Friend?"

"Ever hear of panic?" Johnny said. "Just listen a minute."

Quickly then, he outlined his plan. Tom and Greg listened, watched Johnny make marks with his finger in the dust. When he finished, Greg whistled softly. "You missed your life

work," he said. "You should have gone into crime."

"If I'd had a ghost to help me, I might have," Johnny said.

"It's perfect," Tom said, "if it works. But it all depends on one thing . . . keeping it rolling after we start . . ."

For another five minutes they went over the details. Then Johnny clapped them each on the shoulder. "It's up to you two," he said. "Let's go."

They moved down the large shaft to the place where it broke into several spurs. Johnny started down the chute toward the engine rooms; Tom and Greg headed in opposite directions toward the main body of the ship. Just as they broke up, they heard a muffled metallic sound from the nearest compartment grill.

It was the *clang-clang-clang* of the orbit-ship's general alarm.

Crewmen stopped with food halfway to their mouths, jerked away from tables. Orders buzzed along a dozen wires, and section chiefs began reporting their battle-stations alert and ready. Finally Tawney snapped on the general public address system speaker. "Now get this," he roared. "I want every inch of this ship searched . . . every corridor, every compartment. I want a special crew standing by for missile launching. I want double guards at every airlock. If they get a ship away from here, the man who lets them through had better be dead when

I find him . . ." He broke off, clutching the speaker until his voice was under control again. "All right, move. They're armed, but there's no place they can go. Find them."

A section-chief came back over the speaker. "Dead or alive, boss?"

"Alive, you idiot! At least the Hunter brat. I'll take the other one any way you can get him."

He switched off, and waited, pacing the control cabin like a caged animal. Ten minutes later a buzzer sounded. "Hydroponics, boss. All clear."

"No sign of them?"

"Nothing."

Another buzz. "Number seven ore hold. Nothing here."

Still another buzz. "Crew's quarters. Nothing, boss."

One by one the reports came in. Fuming, Tawney checked off the sections, watched the net draw tighter throughout the ship. They were somewhere, they had to be . . .

But nobody seemed to find them.

He was buzzing for his first mate when the power went off. The lights went out, the speaker went dead in his hand. The computers sighed contentedly and stopped computing. Abruptly the emergency circuits went into operation, flooding the darkness with harsh white lights. The intercom started buzzing again.

"Engine room, boss."

"What happened down there?"

Tawney roared.

The man sounded like he'd just run the mile. "Generators," he panted. "Blown out."

"Well, get somebody in there to fix them. Have a crew seal off the area . . ."

"Can't, boss. Fix them, I mean."

"Why not? What have we got electricians for?"

"There's nothing left to fix. The generators aren't wrecked . . . they're demolished . . ."

"Then get the pair that did it . . ."

"They're not here. We've been sealed up tight. There's no way anybody could have gotten in here . . ."

After that, things began to get confusing.

For a while Merrill Tawney thought that his crew was going crazy . . . and then he began to wonder if he were the one who was losing his mind.

Whatever the case, Merrill Tawney was certain of one thing. The things that were happening on his orbit-ship could not possibly be happening.

A guard in one of the outer shell storage holds called in with a disquieting report. Greg Hunter, it seemed, had just been spotted vanishing into one of the storage compartments from the main outer-shell corridor. When the guard had broken through the jammed hatchway to collar his trapped victim, there was no sign of the victim anywhere around.

At the same moment, a report

came in from a guard on the opposite side of the ship. He had just spotted Greg Hunter *there*, it seemed, moving down a spur corridor. The guard had held his fire (according to Tawney's orders) and summoned help to corner the quarry . . . but when help arrived, the quarry had vanished.

Five minutes later the Hunter boy was discovered in the Hydroponics section, busily reducing all the yeast vats to shambles with a curious weapon that seemed to eat holes in things. It ate the deck out from under the guard's feet, sending him plunging through the floor into the galley. By the time he had scrambled back again, the Hunter boy was gone, and a rapid move to seal off the region failed to turn him up again. The guard was upset; Tawney was a great deal more upset, because at the time Greg Hunter was (reportedly) playing havoc with the yeast-vats in Hydroponics he was also (reportedly) knocking guards down like ten-pins in the main corridor off the engine room while reinforcements tried to pin him down with a wide-beam stunner . . .

Quite suddenly emergency circuits closed and lights flashed in the control cabin, the special signal for a meteor-collision with the outer shell in No. 3 hold. Tawney signalled for the section chief frantically. "What's happening down there?"

"I can't talk," the section

chief gasped. "Gotta get into a suit, we're leaking in here . . ."

"Well, plug up the hole!"

"The hole's four feet wide, sir!" There was a fit of coughing and the contact broke. The signals for No. 4 hold and No. 5 hold were flashing now; while the crew members in the vicinity scrambled for pressure suits someone systematically proceeded to blow holes in No. 9, No. 10 and No. 11 holds . . .

It was impossible. The reports came in thick and fast. Greg Hunter was in two places at once, and everywhere he went . . . in both places . . . there was a trail of unbelievable destruction. Bulkheads demolished, gaping holes torn in the outer shell, the air-reconditioning units smashed beyond repair . . . Tawney buzzed for his first mate.

An emergency switch cut into the line, with the frantic voice of a section chief. Johnny Coombs had been spotted disappearing into the ventilator shaft in the engine sector. "Well, go in after him!" Tawney screamed. He got his first mate finally, and snarled orders into the speaker. "They're in the ventilators. Get a crew in there and stop them."

But it was dark in the ventilator shafts. No emergency lights in there. Worse, the crewmen were hearing the things that were being whispered around the ship. The ventilator shafts yawned menacingly before them; they went in reluctantly. Once in the dark maze of tunnels,

identification was difficult. Two guards met each other headlong in the darkness, and put each other out of the fight in a flurry of nervous stunner-fire. While they searched more of the holds were broken open, leaking air through gaping rents in the hull . . .

Tawney felt the panic spreading; he tried to curb it, and it spread in spite of him. The fugitives were appearing and disappearing like wraiths. Reports back to control cabin took on a frantic note, confused and garbled. Now the second-level bulkheads were being attacked. Over a third of the compartments were leaking precious air into outer space.

When a terrified section chief came through with a report that two Greg Hunters had been spotted by the same man at the time, and that the guards in the sector were shooting at anything that moved, including other guards, Tawney made his way to the radio cabin and put through a frantic signal to Jupiter Equilateral headquarters on Mars.

The contact took forever, even with the ship's powerful emergency boosters. By the time someone at headquarters was reading him, Tawney's report sounded confused. He was trying for the third time to explain, clearly and logically, how two men and a ghost were scuttling his orbit-ship under his very feet when one wall of the cabin vanished in a crackle of blue fire,

and he found himself staring at two Greg Hunters and a grim-faced Johnny Coombs.

He made squeaky noises into the microphone and dropped it with a crash. He groped for a chair; Johnny jerked him to his feet again. "A scout-ship," he said tersely. "Clear it for launching. We want one with plenty of fuel, and we don't want a single guard anywhere near the airlock." He picked up an intercom microphone and thrust it into the little fat man's trembling hand. "Now move! And you'd better be sure they understand you, because you're coming with us."

Merrill Tawney stared first at Tom, then at Greg, and finally at the microphone. Then he moved. The orders he gave to his section chiefs were very clear and concise.

He had never argued with a ghost before, and he didn't care to start now.

It was over so quickly that it seemed to Tom it had just begun, and if so much had not been at stake, it might have been fun.

It had been the gun . . . the remarkable gun that Roger Hunter had left as his legacy . . . that had been the key. It ate through steel and aluminum alloy like putty. Whatever its power source, however it worked, by whatever means it had been built, there had been no match for it on the orbit-ship.

It had *worked* . . . and that

was all that mattered right then.

With it, and with the advantage of a ghost that walked like a man . . . Tom Hunter, to be exact . . . they had reduced the Jupiter Equilateral orbit-ship to a smoking wreck in something less than thirty minutes.

The signal came back that a scout-ship was ready, unguarded. Johnny prodded Tawney with the stunner. "You first," he said.

"But where are you taking me?"

"You'll see," Johnny said.

"It was a trick," Tawney, glaring at Tom. "They told me they shot your ship to pieces . . ."

"The ship, yes," Tom said. "Not me."

"Well . . . well, that's good, that's good," Tawney said quickly. He turned to Greg. "You don't have to take me back . . . the bargain is still good . . ."

"Move," Johnny Coombs said.

With Tawney between them, Greg and Tom marched down the corridor toward the airlock, with Johnny bringing up the rear. No one stopped them. No one even came near them. One crewman stumbled on them in the corridor; he saw Tawney with a gun in his back, and fled in terror.

They found the scout-ship, and strapped Tawney down to an acceleration bunk, binding his hands and feet so he couldn't move. Greg checked the controls while Tom and Johnny strapped down. A moment later the en-

gines fired, and the leaking wreck of the orbit-ship fell away, dwindling and disappearing in the blackness of space.

It was a quiet journey. The red dot that was Mars grew larger every hour. One of the three stayed awake at all times to watch Tawney while the others slept. During the second rest period, Tom woke up while Greg was on duty.

"How's our prisoner doing?" Tom asked.

"No problem there, he can barely move. I almost wish he'd try something, he's too quiet."

It was true. Tawney had recovered from his shock . . . but rather than grow more worried as Mars grew large on the screen, he seemed to become more cheerful by the minute. "He doesn't seem very worried, does he?" Tom said.

"No, and it doesn't quite add. We've got enough on him to get Jupiter Equilateral pushed right out of the Belt."

"I'd still feel better if we had the whole picture for the Major," Tom said. "We still don't know what Dad found, or where he hid it . . ."

The uneasiness grew. Tawney ignored them, staring at the image of the red planet on the viewscreen almost eagerly. Then, eight hours out of Sun Lake City a U.N. Patrol ship appeared, moving toward them swiftly. "Intercepting orbit," Greg said. "Looks like they were waiting for us."

They watched as the big ship

moved in to tangential orbit, matching its speed to theirs. Then Greg snapped the communicator switch. "Sound off," he said cheerfully. "We've got a prize for you."

"Stand by, we're boarding you," the Patrol sent back. "And put your weapons aside."

Four scooters broke from the side of the Patrol ship. Greg activated the airlock. Five minutes later a man in Patrol uniform with captain's bars stepped into the control cabin, a stunner on ready in his hand. Three Patrolmen came in behind him.

The captain looked around the cabin, then saw Tawney, and took a deep breath. "Well, thank the stars you're safe at any rate. Pete, Jimmy, take the controls."

"Hold on," Greg said. "We don't need a pilot."

The Captain looked at him. "Sorry, but we're taking you in. There won't be any trouble unless you make it. You three are under arrest, and I'm authorized to make it stick if I have to. I suggest you just cooperate."

They stared at him. Then Johnny said, "What are the charges?"

"You ought to know," the Captain said. "We have a formal complaint from the main offices of Jupiter Equilateral, charging you with piracy, murder, kidnapping of a company official, and totally wrecking a company orbit ship. I don't quite see how you managed it, but we're going to find out in short order."

There was a stunned silence

in the cabin, and then a sound came from the rear of the cabin. Merrill Tawney was laughing.

12. The Sinister Bonanza

THEY were taken to a small, drab internment room. A half hour passed and still no word from the Major. From the moment the Patrol crew had boarded them, everything had seemed like a bad dream. The shock of the arrest, the realization that the Captain had been serious when he reeled off the charges lodged against them . . . they had been certain it was some kind of ill-planned joke until they saw the delegation of Jupiter Equilateral officials waiting at the port to greet Merrill Tawney like a man returned from the dead. They had watched Tawney climb into the sleek company car and drive off toward the gate, while the Captain had escorted them without a word down to the internment rooms.

The door clicked, and the Captain looked in. "All right, come along now," he said.

"Is the Major here?" Tom said.

"You'll see the Major soon enough." The Captain herded them into another room, where a clerk efficiently fingerprinted them. Then they went down a ramp to a jitney-platform, and boarded a U.N. official car. The trip into the city was slow; rush-hour traffic from the port was heavy. When they reached U.N.

headquarters, there was another wait in an upper level ante-room. The Captain stood stiffly with his hands behind his back and ignored them.

"Look, this is ridiculous," Greg burst out finally. "We haven't done anything. You haven't even let us make a statement."

"Make your statement to the Major. It's his headache, not mine, I'm happy to say."

"But you let that man walk out of there scot free . . ."

The Captain looked at him. "If I were you," he said, "I'd stop complaining and start worrying. If I had Jupiter Equilateral at my throat, I'd worry plenty, because once they start they don't stop."

A signal light blinked, and he took them downstairs. Major Briarton was behind his desk; his eyes tired, his face grim. He dismissed the Captain, and motioned them to seats. "All right, let's have the story," he said, "and by the ten moons of Saturn it had better be convincing, because I've about had my fill of you three."

He listened without interruption as Tom told the story, with Greg and Johnny adding details from time to time. Tom told him everything, from the moment they had blasted off for Roger Hunter's claim to the moment the Patrol ship had boarded them, except for a single detail.

He didn't mention the remarkable gun from Roger Hunter's gun case. The gun was still in

the spacer's pack he had slung over his shoulder; he had not mentioned it when the Patrolmen had taken their stunners away. Now as he talked, he felt a twinge of guilt in not mentioning it . . .

But he had a reason. Dad had died to keep that gun secret. It seemed only right to keep the secret a little longer. When he came to the part about their weapons, he simply spoke of "Dad's gun" and omitted any details.

And through the story, the Major listened intently, interrupting only occasionally, pulling at his lip and scowling.

"So we decided that the best way to convince you that we had the evidence you wanted was to bring Tawney back with us," Tom concluded.

"A brilliant maneuver," the Major said dryly. "A real stroke of genius."

"But then the Patrol ship intercepted us and told us we were under arrest. And when we landed, they let Tawney drive off without even questioning him."

"The least we could do, under the circumstances," the Major said.

"Well, I'd like to know why," Greg broke in bitterly. "Why pick on us? We've just been telling you . . ."

"Yes, yes, I heard every word of it," the Major sighed. "If you knew the trouble . . . oh, what's the use? I've spent the last three solid hours talking myself

hoarse, throwing in every bit of authority I could muster and jeopardizing my position as Coordinator here, for the sole purpose of keeping you three idiots out of jail for a few hours."

"Jail!"

"That's what I said. The brig. The place they put people when they don't behave. You three are sitting on a nice, big powder keg right now, and when it blows I don't know how much of you is going to be left."

"Do you think we're lying?" Greg said.

"Do you know what you're charged with?" the Major snapped back.

"Some sort of nonsense about piracy . . ."

"Plus kidnapping. Plus murder. To say nothing of totally disabling a seventeen-million-dollar orbit-ship and placing the lives of four hundred crewmen in jeopardy." The Major picked up a sheet of paper from his desk. "According to Merrill Tawney's statement, the three of you hijacked a company scout-ship that chanced to be scouting in the vicinity of your father's claim. Your attack was unprovoked and violent. Everybody on Mars knows you were convinced that Jupiter Equilateral was responsible for your father's death." He looked up. "In the absence of any evidence, I might add, although I did my best to tell you that." He rattled the report-sheet. "All right. You took the scout-ship by force, with the

pilot at gunpoint, and made him home in on his orbit-ship. Then you proceeded to reduce that orbit-ship to a leaking wreck, although Tawney tried to reason with you and even offered you amnesty if you would desist. By the time the crew stopped shooting each other in the dark . . . fifteen of them subsequently expired, it says here . . . you had stolen another scout-ship and kidnapped Tawney for the purpose of extorting a confession out of Jupiter Equilateral, threatening him with torture if he did not comply . . ." The Major dropped the paper to the desk.

Johnny Coombs picked it up, looked at it owlishly, and put it back again. "Pretty large operation for three men, Major," he said.

The Major shrugged. "You were armed. That orbit-ship was registered as a commercial vessel. It had no reason to expect a surprise attack, and had no way to defend itself."

"They were armed to the teeth," Greg said disgustedly. "Why don't you send somebody out to look?"

"Oh, I could, but why waste the time and fuel? There wouldn't be any weapons aboard."

"Then how do they explain the fact that the *Scavenger* was blown to bits and Dad's orbit-ship ripped apart from top to bottom?"

"Details," the Major said. "Mere details. I'm sure that the

company's lawyers can muddy the waters quite enough so that little details like that are overlooked. Particularly with a sympathetic jury and a judge that plays along."

He stood up and ran his hand through his hair. "All right, granted I'm painting the worst picture possible . . . but I'm afraid that's the way it's going to be. I believe your story, don't worry about that. I know why you went out there to the Belt and I can't really blame you, I suppose. But you were asking for trouble, and that's what you got. Frankly, I am amazed that you ever returned to Mars, and how you managed to make rubble of an orbit-ship with a crew of four hundred men trying to stop you is more than I can comprehend. But you did it. All right, fine. You were justified; they attacked you, held you prisoner, threatened you. Fine. They'd have cut your throats in another few hours, perhaps. Fine. I believe you. But there's one big question that you can't answer, and unless you can no court in the Solar System will listen to you."

"What question?" Tom said.

"The question of motives," the Major replied. "You had plenty of motive for doing what Tawney says you did. But what motive did Jupiter Equilateral have, if your story is true?"

"They wanted to get what Dad found, out in the Belt."

"Ah, yes, that mysterious bonanza that Roger Hunter

found. I was afraid that was what you'd say. And it's the reason that Jupiter Equilateral is going to win this fight, and you're going to lose it."

"I don't think I understand," Tom said slowly.

"I mean that I'm going to have to testify against you," the Major said. "*Because your father didn't find a thing in the Asteroid Belt*, and I happen to know it."

"It's been a war," the Major said later, "a dirty vicious war with no holds barred and no quarter given. Not a shooting war, of course, nothing out in the open . . . but a war just the same, with the highest stakes of any war in history."

"It didn't look like a war, at first," the Major went on. "Back when the colonies were being built, nobody really believed that anything of value would come of them . . . scientific outposts, perhaps, places for laboratories and observatories, not much more. The colonies were placed under United Nations control. Nobody argued about it."

"And then things began to change. There was wealth out here . . . and opportunities for power. With the overpopulation at home, Earth was looking more and more to Mars and Venus for a place to move . . . not tiny colonies, but places for millions of people. And as Mars grew, Jupiter Equilateral grew."

"But it was just a mining company," Tom said.

"At first it was, but then its interests began to expand. The company accumulated wealth, unbelievable wealth, and it developed many friends. Very soon it had friends back on Earth fighting for it, and the United Nations found itself fighting to stay on Mars."

"I don't see why," Tom said. "The company already has half the mining claims in the Belt . . ."

"They aren't interested in the mining," the Major said. "They have a much longer-range goal than that. The men behind Jupiter Equilateral are looking ahead. They know that someday Earthmen are going to have to go to the stars for colonies . . . it won't be a matter of choice after a while, they'll *have* to go. Well, Jupiter Equilateral's terms are very simple. They're perfectly willing to let the United Nations control things on Earth. All they want is control of everything else. Mars, if they can drive us out. Venus too, if it ever proves up for colonies. And if they can gain control of the ships that leave our Solar System for the stars, they can build an empire, and they know it."

They were silent for a moment. Then Johnny Coombs said, "Doesn't anybody on Earth know about this?"

"There are some who know . . . but they don't see the danger. They think of Jupiter Equilateral as just another big company. So far U.N. control of Mars and Venus has held up,

even though the pressure on the legislators back on Earth has been getting heavier and heavier. Jupiter Equilateral won the greatest fight in its history when they limited U.N. jurisdiction to Mars, and kept us out of the Belt. And now they hope to convince the lawmakers that we're incompetent to administer the Martian colonies and keep peace out here. If they succeed, we'll be called home in nothing flat; we've had to fight just to stay."

The Major spread his hands helplessly. "Like I said, it's been a war. Our only hope was to prove that the company was using piracy and murder to gain control of the asteroids. We had to find a way to smash the picture they've been painting of themselves back on Earth as a big, benevolent organization interested only in the best for Earth colonists on the planets. We had to expose them before they had the Earth in chains . . . not now, maybe not even a century from now, but sometime, years from now, when the breakthrough to the stars comes and Earthmen discover that if they want to leave Earth they have to pay toll . . ."

"They could never do that!" Greg protested.

"They're doing it, son. And they're winning. We have been searching desperately for a way to fight back, and that was where your father came in. He could see the handwriting, he knew what was happening. That was why he broke with the com-

pany and tried to organize a competing force before it was too late. And it was why he died in the Belt. He knew I couldn't send an agent out there without unquestionable evidence of major crime of some sort or another. But a private citizen could go out there, and if he happened to be working with the U.N. hand in glove, nobody could do anything about it."

"Then Dad was a U.N. agent?"

"Oh, not officially. There's not a word in the records. If I were forced to testify under oath, I would have to deny any connection. But unofficially, he went out there to lay a trap."

The Major told them then. It had been an incredible risk that Roger Hunter had taken, but the decision had been his. The plan was simple: to involve Jupiter Equilateral in a case of claim-jumping and piracy that would hold up in court, pressed by a man who would not be intimidated and could not be bought out. Roger Hunter had made a trip to the Belt and come back with stories . . . very carefully planted in just the right ears . . . of a fabulous strike. He knew that Jupiter Equilateral had jumped a hundred rich claims in the past, forcing the independent miners to agree, frightening them into silence or disposing of them with "accidents."

But this was one claim they were not going to jump. The U.N. cooperated, helping him spread the story of his Big

Strike until they were certain that Jupiter Equilateral would go for the bait. Then Roger Hunter had returned to the Belt, with a U.N. Patrol ship close by in case he needed help.

"We thought it would be enough," the Major said unhappily. "We were wrong, of course. At first nothing happened . . . not a sign of a company ship, nothing. Your father contacted me finally. He was ready to give up. Somehow they must have learned that it was a trap. But they had just been careful, was all. They waited until our guard was down, and then moved in fast and hit hard."

He sank down in his seat behind the desk, regarding the Hunter twins sadly. "You know the rest. Perhaps you can see now why I tried to keep you from going out there. There was no proof to uncover and no bonanza lode for you to find. There never was a bonanza lode."

The twins looked at each other, and then at the Major. "Why didn't you tell us?" Greg said.

"Would you have listened? Would telling you have kept you from going out there? There was no point to telling you, I knew you would have to find out for yourselves, however painfully. But what I'm telling you now is the truth."

"As far as it goes," Tom Hunter said. "But if this is really the truth, there's one thing that doesn't fit into the picture."

Slowly Tom pulled the gun

case from his pack and set it down on the Major's desk. "It doesn't explain what Dad was doing with this."

13. Pinpoint in Space

TOM knew now that it was the right thing to do. There was no question, after the Major's story, of what Dad had been doing out in the Belt at the time he had been killed. He had been doing a job that was more important to him than asteroid mining . . . but he had found something more important than his own life, and had no chance to send word of what he had found back to Major Briarton on Mars. That had been the unforeseeable part of the trap.

But now, of course, the Major had to know.

The Mars Coordinator looked at the thing on the desk for a long moment before he reached out to touch it. The bright metal gleamed in the light, pale gray, lustrous. The Major picked it up, balanced it expertly in his hand, and a puzzled frown clouded his face. He examined it minutely.

"What is this thing?" he said.

"Suppose you tell us," Johnny Coombs said from across the room.

"It looks like a gun."

"That's what it is, all right."

"You've fired it?"

"Yes . . . but I wouldn't fire it in here, if I were you," Johnny said. "You were wondering

how we wrecked Tawney's orbitship so thoroughly. That's your answer right there." He told about the hole in the bulkhead, the way the ship's generators had melted like clay under the powerful blast of the weapon.

The Major could hardly control his excitement. "Where did you get it?" he asked, turning to Tom.

"From the space pack that you turned over to us. I didn't even look at it, until we needed a gun in a hurry. I just assumed it was Dad's revolver."

"And your father found it somewhere in the Belt," the Major said softly. He looked at the weapon again, shaking his head. "There isn't any such gun," he said finally. "These things you say it could do . . . they would require energy enough to break down the cohesive forces of molecules. There isn't any way we know of to harness that kind of energy and channel it in a hand weapon. Nobody on Earth . . ."

He broke off and stared at them.

"That's right," Johnny said. "Nobody on Earth."

"You mean . . . extraterrestrial?"

"There isn't any other answer," Johnny said. "Look at the thing, Major. Feel it. Does it feel like it was made for a human hand? It doesn't fit, it doesn't balance, you have to hold it with both hands to aim it . . ."

"But where did it come

from?" the Major said. "We've never had visitors from another star system . . . not in the course of recorded history. And we know that Earthmen are the only intelligent creatures in our Solar System."

"You mean that they're the only ones *now*," Tom said.

"Or any other time."

"We don't know that, for sure," Tom said.

"Look, we've explored Venus, Mars, all the major satellites. If there had ever been intelligence on any of them, we'd have known it."

"Maybe there was a planet that Earthmen haven't explored," Tom said. "Even Dad tried to tell us that. The quotation from Kepler that he scribbled down in his log . . . 'Between Jupiter and Mars I will put a planet.' Why would Dad have written that? Unless he had suddenly discovered proof that there *had* been a planet there?"

"You mean this . . . this gun," the Major said.

"And whatever else he found."

"But there's never been any proof of that theory . . . not even a hint of proof."

"Maybe Dad found proof. There are hundreds of thousands of asteroid fragments out there in the Belt, and only a few hundred of them have ever been examined by men."

On the desk the strange weapon stared up at them. Evidence, mute evidence, and yet its very existence said more than a

thousand words. It was there. It could not be denied.

And someone . . . or *something* . . . had made it.

Slowly the Major pulled himself to his feet. "It must have happened after his last message to me," he said. "It wasn't part of the scheme we had set up, but he made a strike just the same . . . an archeological strike . . . and this gun was part of it." He picked up the weapon, turned it over in his hand. "But it was days after that last message before his signal went off, and the Patrol ship moved in."

"It makes sense," Johnny Coombs said. "He found the gun, and something more."

"Like what?"

"I wouldn't even guess," Johnny said. "A planet with a race of creatures intelligent enough and advanced enough to make a weapon like that . . . it could have been anything. But whatever it was, it must have scared him. He must have known that a company ship might turn up any minute . . . so he hid whatever he had found, and all he dared to leave was a hint."

"And now it's vanished," the Major said. "The big flaw in the whole idea. My Patrol ship found nothing when it searched the region. You looked, and drew a blank. The company men scoured the area." He spread his hands helplessly. "You see, it just won't hold up, not a bit of it. Even with this gun, it won't hold up. We've got to find the answer."

"It's out there somewhere," Tom said doggedly. "It's got to be."

"But where? Don't you see that everything hangs on that one thing? If we could prove that your father found something just before he was killed, we could tear Jupiter Equilateral's case against you into shreds. We could charge them with piracy and murder, and make it stick. We could break their power once and for all... but until we know what Roger Hunter found, we're helpless. They'll take you three to court, and I won't be able to stop them. And if you lose that case, it may mean the end of U.N. authority on Mars."

"Then there's just one thing to do," Johnny Coombs said. "We've got to find Roger Hunter's bonanza."

It was almost midnight when they left the Major's office, a gloomy trio, walking silently up the ramp to the Main Concourse, heading toward the living quarters.

They had been talking with the Major for hours, going over every facet of the story, wracking their brains for the answer... but the answer had not come.

Roger Hunter had found something, and hidden it so well that three groups of searchers had failed to discover it. After seeing the gun, the Major was convinced that there had indeed been a discovery made. But

whatever that discovery had been, it was gone as if it had never existed... as if by some sort of magic it had been turned invisible, or conjured away to another part of the Solar System.

Finally, they had given up, at least for the moment. "It has to be there," the Major had said wearily. "It hasn't vanished, or miraculously ceased to exist. We know he was working on one claim, one asteroid. There were no other asteroids in the region... and even the ones within suicide radius have been searched."

"It's there, all right," Tom said. "We're missing something, that's all."

"But what? Asteroids have stable orbits. Nobody can just make one disappear...."

They had called it a night, finally.

Once home they found more bad news waiting. There were two messages on the recordomat. The first was an official summons to appear before the United Nations Board of Investigations at 9:00 the following morning to answer "certain charges placed against the above named persons by the Governing Board of Jupiter Equilateral Mining Industries, and by one Merrill Tawney, plaintiff, representing said Governing Board." They listened to the plastic record twice. Then Greg tossed it down the waste chute.

The other message was addressed to Greg, from the Com-

manding Officer of Project Star-Jump. The message was very polite and regretful; it was also very firm. The pressure of the work there, in his absence, made it necessary for the Project to suspend Greg on an indefinite leave of absence. Application for reinstatement could be made at a later date, but acceptance could not be guaranteed. . . .

"Well, I might have expected it," Greg said, "after what the Major told us. The money for Star-Jump must have been coming from somewhere, and now we know where. The company probably figures to lay claim on any star-drive that's ever developed." He dropped the notice down the chute, and laughed. "I guess I really asked for it."

"You mean I pushed you into it," Tom said bitterly. "If I'd kept my big mouth shut at the very start of this thing, you'd have gone back to the Project and that would have been the end of it . . ."

Greg looked at him. "You big bum, do you think I really care?" He grinned. "Don't feel too guilty, Twin. We've been back to back on this one."

He pulled off his shirt and walked into the shower room. Johnny Coombs was already stretched out on the sofa, snoring softly.

Quite suddenly the room seemed hot and stuffy, oppressive. He couldn't make his thoughts come straight. There had been too much thinking, too

much speculation. Tom stood up and slipped on his jacket.

He had to walk, to move about, to try to think. He slipped open the door, and started for the ramp leading to the Main Concourse.

There was an answer, somewhere.

He walked on along the steel walkways, trying to clear his mind of the doubts and questions that were plaguing him. At first he just wandered, but presently he realized that he had a destination in mind.

He went up a ramp and across the lobby of the United Nations Administration Building. He took a spur off the main corridor, and came to a doorway with a small circular staircase beyond it. At the bottom of the stairs he opened a steel door and stepped into the Map Room.

It was a small darkened amphitheater, with a curving row of seats along one wall. On either side were film viewers and micro-readers. And curving around on the far wall, like a huge parabolic mirror, was the Map.

Tom had been here many times before, and always he gasped in wonder when he saw the awesome beauty of the thing. Stepping into the Map Room was like stepping into the center of a huge cathedral. Here was the glowing, moving panorama of the Solar System spread out before him in a breathtaking three-dimensional image. Standing here before the Map it

seemed as if he had suddenly become enormous and omnipotent, hanging suspended in the blackness of space and staring down at the Solar Syster from a vantage point a million miles away.

Once, Dad had told him, there had been a great statue in the harbor of Old New York which had been a symbol of freedom for strangers coming to that city from across the sea, and a welcome for countrymen returning home. And someday, he knew, this view of the Solar System would be waiting to greet Earthmen making their way home from distant stars. The Map was only an image, a gift from the United Nations to the colonists on Mars, but it reproduced the Solar System in the minutest detail that astronomers could make possible.

In the center, glowing like a thing alive, was the Sun, the hub of the magnificent wheel. Around it, moving constantly in their orbits, were the planets, bright points of light on the velvet blackness of the screen. Each orbit was computed and held on the screen by the great computer in the vault below.

But there was more on the Map than the Sun and the planets, with their satellites. Tiny green lights marked the Earth-Mars and the Earth-Venus orbit-ships, moving slowly across the screen. Beyond Mars, a myriad of tiny lights projected on the screen, the asteroids. Without the magnifier Tom could identify the larger ones.

. . . Ceres, on the opposite side of the Sun from Mars now as it moved in its orbit; smaller Juno, and Pallas, and Vesta . . .

For each asteroid which had been identified, and its orbit plotted, there was a pinpoint of light on the screen. For all its beauty, the Map had a very useful purpose . . . the registry and identification of asteroid claims among the miners of Mars. Each asteroid registered as a claim showed up as a red pinpoint; unclaimed asteroids were white. But even with the advances of modern astronomy only a small percentage of the existing asteroids were on the map, for the vast majority had never been plotted.

Tom moved up to the Map and activated the magnifier. Carefully he focussed down on the section of the Asteroid Belt they had visited so recently. Dozens of pinpoints sprang to view, both red and white, and beneath each red light the claim-number neatly registered. Tom peered at the section, searching until he found the number of Roger Hunter's last claim.

It was quite by itself, not a part of an asteroid cluster. He stepped up the magnification, peered at it closely. There were a dozen other pinpoints, all unclaimed, within a ten-thousand-mile radius. . . .

But near it, nothing . . .

No hiding place.

And then, suddenly, he knew the answer. He stared at the Map, his heart pounding in his

throat. He cut the magnification, scanning a wide area. Then he widened the lens still further, and checked the coordinates at the bottom of the viewer.

He knew that he was right. He had to be right. But this was no wild dream, this was something that could be proved beyond any question of error.

Across the room he picked up the phone to Map Control. It buzzed interminably; then a sleepy voice answered.

"The Map," Tom managed to say. "It's recorded on time-lapse film, isn't it?"

"Course it is," the sleepy voice said. "Observatory has to have the record. One frame every hour . . ."

"I've got to see some of the old film," Tom said.

"Now? It's three in the morning."

"I don't need the film itself, just project it for me. There's a reader here."

He gave the man the dates he wanted, Mars time. The man broke the contact, grumbling, but moments later one of the film-viewers sprang to life. The Map coordinates showed at the bottom of the screen.

Tom stared at the filmed image . . . the image of a segment of the Asteroid Belt the day before Roger Hunter had died.

It was there. When he had looked at the Map, he had seen a single red pinpoint of light, Roger Hunter's asteroid, with nothing in the heavens anywhere near it.

But on the film image taken weeks before there were two points of light. One was red, with Roger Hunter's claim number beneath it. The other was white, so close to the first that even at full magnification it was barely distinguishable.

But it was there.

Tom's hands were trembling with excitement; he nearly dropped the phone receiver as he punched the buttons to ring the apartment. Greg's face appeared on the screen, puffy with sleep. "What's that? Thought you were in bed . . ."

"You've got to get down here," Tom said.

Greg blinked, waking up. "What's the matter? Where are you?"

"In the Map Room. Wake Johnny up and get down here. And try to get hold of the Major."

"You've found something," Greg said, excited now.

"I've found something," Tom said. "I've found where Dad hid his strike . . . and I know how we can find it! We've got the answer, Greg."

14. The Missing Asteroid

IT HAD been a wild twelve hours since Tom Hunter's call to his brother from the Map Room in Sun Lake City. The Major had arrived first, still buttoning his shirt and wiping sleep from his eyes. Johnny and Greg came in on his heels. They had found Tom waiting for them, so

excited he could hardly keep his words straight.

He told them what he had found, and they wondered why they had not thought of it from the first moment. "We knew there had to be an answer," Tom said, "some place Dad could have used for a hiding place, some place nobody would even think to look. Dad must have realized that he didn't have much time. When he saw his chance, he took it."

And it was pure, lucky chance. Tom showed them the section of the Map he had examined, with the pinpoint of light representing Roger Hunter's asteroid claim. Then the Map Control officer . . . much more alert when he saw Major Briarton . . . brought an armload of films up and loaded them into the projector. They stared at the screen, and saw the two pinpoints of light where one was now.

"What was the date of this?" The Major asked sharply.

"Two days before Dad died," Tom said. "There's quite a distance between them there . . . but watch. One frame for every hour. Watch what happens."

He began running the film, the record taken from the Map itself, accurate as clockwork. The white dot was moving in toward the red dot at a forty-degree angle. For an instant it looked as though the two were colliding . . . and then the distance between them began to widen again. Slowly, hour by hour, the white dot was moving

away, off the screen altogether. . . .

The Major looked up at Tom and slammed his fist on the chair-arm. "By the ten moons of Saturn . . ." he exploded, and then he was on his feet, shouting at the startled Map Control officer. "Get me Martinson down here, and fast. Call the port on a scrambled line and tell them to stand by with a ship on emergency call, with a crack interceptor pilot ready to go. Then get me the plotted orbits of every eccentric asteroid that's crossed Mars' orbit in the last two months. And double-A security on everything . . . we don't want to let Tawney get wind of this. . . ."

Later, while they waited, they went over it to make sure that nothing was missing. "No wonder we couldn't spot it," the Major said. "We were looking for an asteroid in a standard orbit in the Belt."

"But there wasn't any," Tom said. "Dad's rock was isolated, nowhere near any others. And we were so busy thinking of the thousands of rocks in normal orbits between Mars and Jupiter that we forgot that there are a few eccentric ones that just don't travel that way."

"Like this one." The Major stared at the screen. "A long, intersecting orbit. It must swing out almost to Jupiter's orbit at one end, and come clear in to intersect Earth's orbit at the other end . . ."

"Which means that it cuts

right through the Asteroid Belt and on out again." Tom grinned. "Dad must have seen it coming . . . must have thought it was on collision course for a while. But he also must have realized that if he could hide something on its surface as it came near, it would be carried clear out of the Belt altogether in a few days' time."

"And if we can follow it up and intercept it . . ." The Major was on his feet, talking rapidly into the telephone. Sleep was forgotten now, nothing mattered but pinpointing a tiny bit of rock speeding through space. Within an hour the asteroid had been identified, its eccentric orbit plotted. The coordinates were taped into the computers of the waiting Patrol ship, as the preparations for launching were made.

It could not be coincidence. Somewhere on the surface of that tiny planetoid racing in toward the Sun they knew they would find Roger Hunter's secret.

Below them, as they watched, the jagged surface of the asteroid drew closer.

It was not round . . . it was far too tiny a bit of cosmic debris to have sufficient gravity to crush down rocks and round off ragged corners. It was roughly oblong in shape, and one side was sheer smooth rock surface. The other side was rough, bristling with jutting rock. More than anything else it looked like

a ragged mountain top, broken off at the peak and hurled into space by an all-powerful hand.

Slowly the scout-ship moved closer, braking with its forward jets. The pilot was expert. Carefully and surely he aligned the ship with the rock in speed and direction. In the acceleration cot Tom could feel only an occasional gentle tug as the power cut on and off.

Then the Lieutenant said, "I think we can make a landing now, Major."

"Fine. Take a scooter down first, and carry a guy line."

They unstrapped, and changed into pressure suits. In the airlock they waited until the Lieutenant had touched the scooter down. Then Major Briarton nodded, and they clamped their belts to the guy line.

One by one they leaped down toward the rock.

From a few miles out in space, the job of searching the surface had not appeared difficult. From the rock itself, things looked very different. There was no way, from the surface, to scan large areas, and the surface was so rough that they had to take constant care not to damage their boots or rip holes in their suits. There were hundreds of crevices and caves, half concealed by the loose rock that crumbled under their feet as they moved.

They spread out from the scooter for an hour of fruitless searching. Tom spent most of the time pulling his boots free

of surface cracks and picking his way over heaps of jagged rock. None of them got farther than a hundred yards from the starting place. None of them found anything remarkable.

"We could spend weeks covering it this way," Greg said when they met at the scooter again. "Why don't I take the scooter and criss-cross the whole surface at about fifty feet? If I spot anything, I'll yell."

It seemed like a good idea. Greg strapped himself into the scooter's saddle, straddling the fuel tanks, using the hand jet to guide himself as he lifted lightly off the surface. He disappeared over the horizon of rock, then reappeared as he moved over the surface and back.

Tom and Johnny waited with the Major. Twenty minutes later Greg brought the tiny craft back again. "It's no good," he said. "I've scanned the whole brightside, came as close as I dared."

"No sign of anything?" Johnny said.

"Not a thing. The dark side looks like a sheer slab, from what my lights show. If we only had some idea what we were looking for . . ."

"Maybe you weren't close enough," Tom said. "Why not drop each of us off to take a quarter of the brightside and work our way in?"

The others agreed. Tom waited until the Major and Johnny had been posted; then he hopped on the scooter behind Greg and dropped off almost at the line of

darkness, where the sheer slab began. All of them had hoped that there might be a sign, something that Roger Hunter might have left to mark his cache, but if there was one none of them spotted it. Tom checked with the others by the radio in his helmet, and started moving back toward the center of the bright side.

An hour later he was only halfway to the center, and he was nearly exhausted. At a dozen different spots he thought he had found a promising cleft in the rock, a place where something might have been concealed . . . but exploration of the clefts proved fruitless.

And now his confidence began to fail. Supposing he had been wrong? They knew the rock had passed very close to Roger Hunter's asteroid, the astronomical records proved that. But suppose Dad had not used it as his hiding place at all? He pulled himself around another jagged rock shelf, staring down at the rough asteroid surface beyond. . . .

At the base of the rock shelf, something glinted in the sunlight. He leaped down, and thrust his hand into a small crevice in the rock. His hand closed on a small metal object.

It was a gun. It felt well balanced, familiar in his hand . . . the revolver Dad had always carried in his gun case.

He had to let them know. He was just snapping the speaker switch when he heard a growl of static in his earphones, and

then Greg's voice, high-pitched and excited. "Over here! I think I've found something!"

It took ten minutes of scrambling over the treacherous surface to reach Greg. Tom saw his brother tugging at a huge chunk of granite that was wedged into a crevice in the rock. Tom got there just as the Major and Johnny topped a rise on the other side and hurried down to them.

The rock gave way, rolling aside, and Greg reached down into the crevice. Tom leaned over to help him. Between them they lifted out the thing that had been wedged down beneath the boulder.

It was a metal cylinder, four feet long, two feet wide, and bluntly tapered at either end. In the sunlight it gleamed like polished silver, but they could see a hairline break in the metal encircling the center portion.

They had found Roger Hunter's bonanza.

In the cabin of the scout-ship they broke the cylinder open into two perfect halves. It came apart easily, a shell of paper-thin but remarkably strong metal, protecting the tightly packed contents.

There was no question what the cylinder was, even though there was nothing inside that looked even slightly familiar at first examination. There were several hundred very tiny thin discs of metal that fit on the spindle of a small instrument

that was packed with them. There were spools of film, thin as tissue but amazingly strong. Examined against the light in the cabin, the film seemed to carry no image at all . . . but there was another small machine that accepted the loose end of the film, and a series of lenses that glowed brightly with no apparent source of power. There was a thick block of shiny metal covered on one side with almost invisible scratches . . .

A time capsule, beyond doubt. A confusing treasure, at first glance, but the idea was perfectly clear. A hard shell of metal protecting the records collected inside . . .

Against what? A planetary explosion? Some sort of cosmic disaster that had blown a planet and its people into the fragments that now filled the Asteroid Belt?

At the bottom of the cylinder was a small tube of metal. They examined it carefully, trying to guess what it was supposed to be. At the bottom was a tiny stud. When they pressed it, the cylinder began to expand and unfold, layer upon layer of thin glistening metallic material that spread out into a sheet that stretched halfway across the cabin.

They stared down at it. The metal seemed to have a life of its own, glowing and glinting, focussing light into pinpoints on its surface.

It was a map.
At one side, a glowing ball

with a fiery corona, an unmistakable symbol that any intelligent creature in the universe that was able to perceive it at all would recognize as a star. Around it, in clearly marked orbits, ten planets. The third planet had a single satellite, the fourth two tiny ones. The sixth eleven. The seventh planet had ten, and was encircled by glowing rings.

But the fifth planet was broken into four parts.

Beyond the tenth planet there was nothing across a vast expanse of the map . . . but at the far side was another star symbol, this one a double star with four planetary bodies.

They stared at the glowing map, speechless. There could be no mistaking the meaning of the thing that lay before them, marked in symbols that could mean only one thing to any intelligence that could recognize stars and planets.

But in the center of the sheet was another symbol. It lay half-way between the two Solar Systems, in the depths of interstellar space. It was a tiny picture, a silvery sliver of light, but it too was unmistakeable.

It could be nothing else but a Starship.

Later, as they talked, they saw that the map had told each of them, individually, the same thing. "They had a star-drive," Tom said. "Whatever kind of creatures they were, and whatever the disaster that threat-

ened their planet, they had a star-drive to take them out of the Solar System to another star."

"But why leave a record?" Greg wanted to know. "If nobody was here to use it . . ."

"Maybe for the same reason that Earthmen bury time capsules with records of their civilization," Major Briarton said. "I'd guess that the records here will tell, when they have been studied and deciphered. Perhaps there was already some sign of intelligent life developing elsewhere in the Solar System. Perhaps they hoped that some of their own people would survive. But they had a star-drive, so some of them must have escaped. And with the record here . . ."

"We may be able to follow them," Greg said.

"If we can decipher the record," Johnny Coombs said. "But we don't have any clue to their language."

"Did you have any trouble understanding what the map had to say?" the Major said quietly.

"No . . ."

"I don't think the rest will be much more difficult. They were intelligent creatures. The record will be understandable, all right." He started to fold the map back into a tube again. "Maybe Roger Hunter tried to use the film projector. We'll never know. But he must have realized that he had discovered the secret of a star-drive. He

realized that the United Nations were the ones to explore it and use it, and he gave his life to keep it out of the hands of Tawney and his men . . .”

“A pity,” a cold voice said close behind them, “that he didn’t succeed, after all.”

They whirled. In the hatchway to the after-cabin, Merrill Tawney was standing, with a smile on his lips and a Markheim stunner trained directly on Major Briarton’s chest.

15. The Final Move

“I REALIZE I’m much earlier than you expected, Major. You did a very neat job of camouflaging your takeoff . . . we were almost fooled . . . and no doubt the dummy ship you sent off later got full fanfare. I suppose there will be a dozen Patrol ships converging on this spot in a few hours, expecting to surprise a Jupiter Equilateral ship making a desperate attempt to hijack your little treasure here.”

The little fat man laughed cheerfully. “Unfortunately for you,” he added, “we have many friends on Mars . . . including a man in the Map room . . . and I’m afraid your little trap isn’t going to work after all.”

The Major’s face was gray. “How did you get here?”

“By hitch-hiking. How else? Most uncomfortable, back there, even with a pile of pressure suits for padding, but your pilot was really very skillful.”

Johnny Coombs turned on the Major. “What does he mean, a trap? I don’t get this . . .”

The Major sighed wearily. “I had to try to force his hand. Even if we found what we were looking for, we had no case that could stand up against them. We needed *proof* . . . and I thought that with this as bait we could trap them. He’s right about the Patrol ships . . . but they won’t be near for hours.”

“And that will be a little late to help,” Tawney said pleasantly.

The Major glared at him. “Maybe so . . . but you’ve gone too far this time. This is an official U.N. ship. You’ll never be able to go back to Mars.”

“Really?” the fat man said. “And why not? Officially I’m on Mars right now, with plenty of people to swear to the fact.” He chuckled. “You seem to forget that little matter of proof, Major. When your Patrol ships find a gutted ship and five corpses, they may suspect that something more than an accident was involved, but what can they prove? Nothing more than they could prove in the case of Roger Hunter’s accident. Scout-ships have been known to explode before.”

He ran his hand over the metal cylinder. “And as for this . . . it’s really a surprise. Of course when we failed to find any evidence of mining activity, we were certain that Roger Hunter’s bonanza was something more than a vein of ore, but *this!* You can be certain that we

will exploit the secret of a star-drive to the very fullest."

"How do you think you can get away with it?" the Major said. "Turning up with something like that right after a whole series of suspicious accidents in space?"

"Oh, we aren't as impatient as some people. We wouldn't be so foolish as to break the news now. Five years from now, maybe ten years, one of our orbitships will happen upon a silvery capsule on one of our asteroid claims, that's all. I wouldn't be surprised if a non-company observer might be on board at the time, maybe even a visiting Senator from Earth. For something this big, we can afford to be patient."

There was silence in the little scout-ship cabin. The end seemed inevitable. This was a desperate move on Tawney's part. He was gambling everything on it; he would not take the chance of letting any of them return to Mars or anywhere else to testify.

Greg caught Tom's eye, saw the hopelessness on his brother's face. He clenched his fists angrily at his side. If it were not for Tom, Dad's bonanza might have gone on circling the sun for centuries, maybe forever, wedged in its hiding place on the rocky surface of the eccentric asteroid.

But it had been found. Earth needed a star-drive badly; a few more years, and the need would be desperate. And if a group of power-hungry men could control

a star-drive and hold it for profit, they could blackmail an entire planet for centuries, and build an empire in space that could never be broken.

He knew that it must not happen that way. Dad had died to prevent it. Now it was up to them.

Greg glanced quickly around the cabin, searching for some way out, something that might give them a chance. His eyes stopped on the control panel, and he sucked in his breath, his heart pounding. A possibility . . .

It would require a swift, sure move, and someone to help, someone with fast reflexes. It was dangerous; they might all be killed. But if his training at Star-jump was good for anything, it might work.

He caught Johnny Coombs' eye, winked cautiously. A frown creased Johnny's forehead. He shot a quick look at Tawney, then lowered his eyelid a fraction of an inch. Greg could see the muscles of his shoulders tightening.

Greg took quick stock of the cabin again. Then he took a deep breath and bellowed, "Johnny . . . duck!"

Almost by reflex, Johnny Coombs hurled himself to the floor. Tawney swung the gun around. There was an ugly ripping sound as the stunner fired . . . but Greg was moving by then. In two bounds he was at the control panel. He hooked an arm around a shock bar, and

slammed the drive switch on full.

There was a roar from below as the engines fired. Greg felt a jolt of pain as the acceleration jerked at his arm. Tom and the Major were slammed back against a bulkhead, then fell in a heap on top of Johnny and the Lieutenant as the awful force of the acceleration dragged them back. Across the cabin Tawney sprawled on the floor. The stunner flew from his hand and crashed against the rear bulkhead.

On the panel Greg could see the acceleration gauge climbing swiftly . . . past four g's, up to five, to six. The ship was moving wildly; there was no pilot, no course.

With all the strength he could muster Greg tightened his arm on the shock bar, lifting his other arm slowly toward the cut-off switch. He had spent many hours in the acceleration centrifuge at Star-Jump, learning to withstand and handle the enormous forces of acceleration for brief periods, but the needle was still climbing and he knew he could not hold on long. His fingers touched the control panel. He strained, inching them up toward the switch . . .

His fingers closed on the stud, and he pulled. The engine roar ceased. On the floor behind him Tawney moved sluggishly, trying to sit up. Blood was dripping from his nose. He was still too stunned to know what had happened.

Greg leaped across the room, caught up the stunner, and then sank to the floor panting. "All right," he said as his breath came back, "that's all. Your ship may have trouble finding us now . . . but I bet our pilot can get us back to Mars."

When they left the Sun Lake City infirmary it was almost noon, and the red sun was gleaming down from overhead. Walking slowly, the Hunter twins moved along the surface street toward the U.N. building.

"He'll recover without any trouble," the doctor had assured them. "He caught the stunner beam in the shoulder, and it will be a while before he can use it, but Johnny Coombs will be hard to keep down."

They had promised Johnny to return later. They had had check-ups themselves. Both Tom's eyes were surrounded by purple splotches, and his broken left arm was in a sling. Greg's arms and legs were so stiff he could hardly move them. The Major and the Lieutenant had been sore but uninjured.

Now the boys walked without talking. Already a U.N. linguist was at work on the record tapes from the metal cylinder, and a mathematician was doing a preliminary survey on the math symbols on the metal block.

"I hope there's no trouble reading them," Greg said.

"There won't be. It'll take time, but the records are decipherable. And Dr. Raymond

was certain that the engineering can be figured out. Earth is going to get her star-ship, all right."

"And we've got work to do."

"You mean the trial? I guess. The Major says that Jupiter Equilateral is trying to pin the whole thing on Tawney now. They won't get away with it, but it may be nasty just the same."

"Well, one thing's sure . . . there'll be some changes made, with the U.N. moving out into the Belt," Greg said.

Somewhere in the distance the

twins heard the rumble of engines. They stopped and watched as a great silvery cargo ship lifted from the space port and headed up into the dark blue sky. They watched it until it disappeared from sight.

They were both thinking the same thing.

An Earth-bound ship, powerful and beautiful, but limited now to the sun and nine planets, unable to reach farther out.

But someday soon a different kind of ship would rise.

THE END

THE MAROONER

(Continued from page 27)

worth thinks to elude us, but he never shall, eh, Mr. Wordsley?" There were tears of frustration in his eyes.

It embarrassed Mr. Wordsley, who could only point to the pall of gleaming dust where their ship had lain, and to the silver needle which glinted for a moment in the sky and was gone.

"Malmsworth would not do that to me," Captain DeCastros said.

But he had.

"We may be here quite a long while," Mr. Wordsley said, and could not contrive to sound downhearted about it.

But Captain DeCastros had already turned away and was feeling his way back along the ledge.

Mr. Wordsley waited just a moment longer; then he took from his pocket a heavy object

and dropped it upon the slope and it rolled over and over, down and down, until its metallic sheen was lost in that superior glare.

It was a spare irmium alloy plug.

He made his way back to the water-maker. They would have to take good care of it from now on.

He was not concerned with the basin. However, in the soft, damp sand beside the basin, plainly imprinted there, as if someone's raiding party had interrupted *someone's* bathing party, there remained a single, small and dainty footprint.

One could almost imagine that a faint breath of perfume still lingered upon the sheltered air of the rift, but, of course, only things which glittered interested Mr. Wordsley.

THE END

THE ALTERNATE PLAN

(Continued from page 42)

"Okay, it's a deal." Bart was mad. "Start concentrating. I'll show you the power of my mind, both now and after I resume that shell." Bart was furious. He tried to leave the place by the wall. He seemed stuck. There were waves like laughter vibrating against the glass. Bart strained and saw that he had come away a little. He tried again and again. There was a little more distance gained. He tried to build the picture of the operating-room in his mind and while he was doing this a flash of Vivian exploded his mind. With that quick image, he felt himself free to drift downward.

There indeed was the hospital. Bart hurried to the operating-room, hovering near the ceiling light, watching the operating team below.

"He's gone, doctor." The anesthetist looked at Jonas. "Respiration's stopped altogether."

No, thought Bart, *Don't close me out now.*

"Let's open the chest and massage the heart."

Yes. Yes.

"I think it's futile, doctor."

"We can try."

Good old Jonas. Bart floated to the table and forced himself into the shell which lay white and unmoving under the penetrating light from above. It wasn't easy, Bart tried to move the heavy hand, but it was quite numb.

"Not a thing. Might as well quit."

Holsclaw's in a hurry. Damn him.

"I'll massage a little longer."

Bart pushed at the leaden eyelid. No go. *Come on, come on.* He felt a convulsive chill, a throbbing in his head.

"I'm getting a pulse." Jonas' voice was excited.

Bart knew there was a searing pain in his throat, but shutting it out of his consciousness was the steady, thumping beat of his own heart.

THE END

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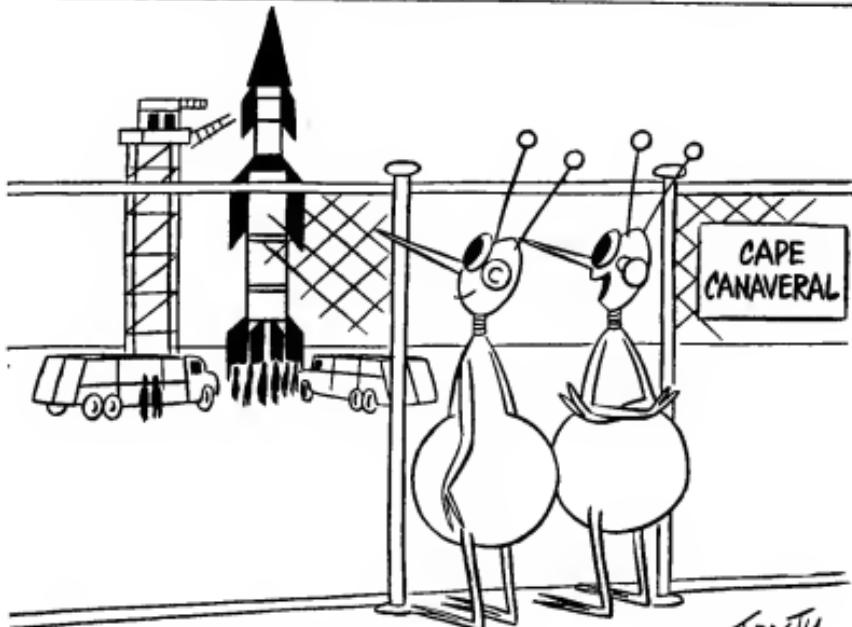
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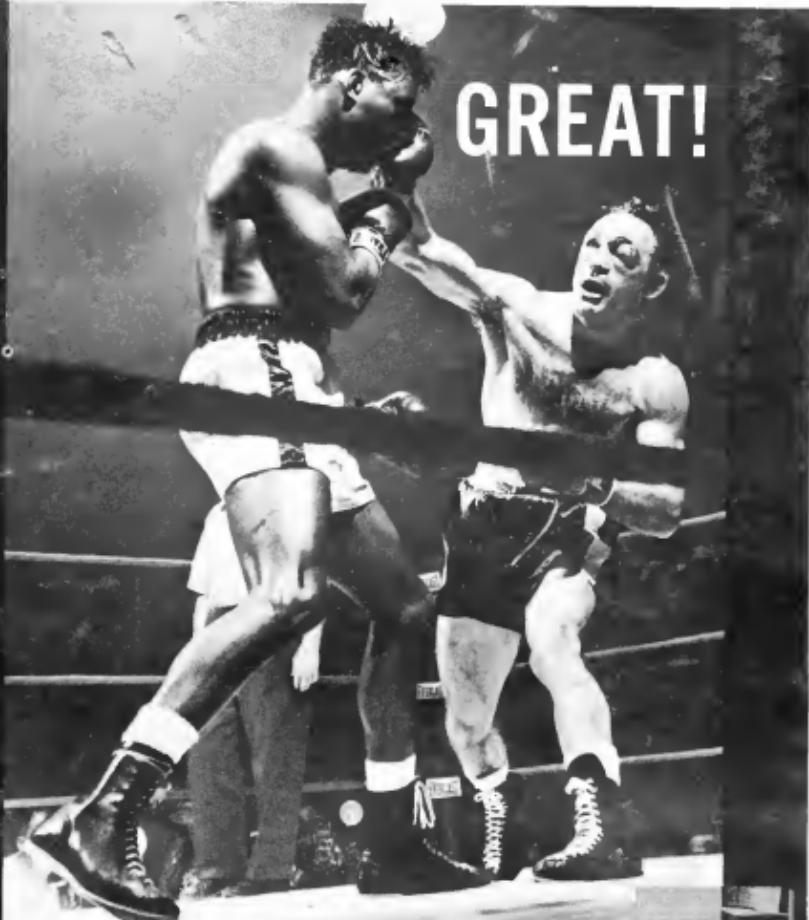
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